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ART. I.—*General Zoölogy, or Systematic Natural History. By George Shaw, M. D. &c. With Plates from the first Authorities, and most select Specimens, engraved principally by Mr. Heath. Vols. IV. and V. 8vo. Large Paper 3l. 16s. small Paper 2l. 12s. 6d. each Volume. Boards. Kearsley. 1803-4.*

THE natural history of fishes has received little attention from those to whom the other departments of natural science have been so much indebted. We cannot trace these animals in their secret haunts: we cannot observe their actions in their retirements. Even their structure has only within a few years been elucidated; and their physiology is still very obscure. Linnæus was led at an early age to the study of this part of animated nature, by the painful office, which devolved to him, of editing the posthumous labours of his friend Artedi. He soon, however, grew weary of the study, or the vegetable kingdom offered a more promising field, in which he obtained, in equal proportion, the honour of accurate research and original invention. The system of Artedi* was never completed; nor did he adhere to it: that of Linnæus remains in the last edition of the *System of Nature*, with few augmentations and little improvements subsequent to its first appearance. To the Prussian naturalist Bloch, this part of science owes its chief attractions and many additions. In his work, the subjects are adorned with the brilliancy of their own colouring, if they be not animated with the spirit of their motions; and the numerous additions which he made to ichthyology, he has arranged in distinct well established genera. La Cépède, as we have lately seen, has collected, from almost every source, the accumulating observations of naturalists

* The work of Artedi seems to have been little attended to. It is in reality a *philosophia ichthyologica*, and contains a vast body of ichthyologic information with numerous references to ancient and modern authors.

and travellers, and has classed them in a system, which, from its extent, appears inadequately and unequally filled, notwithstanding his own numerous additions. Dr. Shaw has followed the system of Linnæus, though he has greatly profited by the volumes of La Cépède, and added numerous species as well as genera from these and the labours of Bloch. We suspect, however, that ichthyology is not with him a favourite science. He appears to enter on it reluctantly: it is seemingly a task, which he pursues with little interest, and which he quits with pleasure. The plates also are not, we think, equal to the embellishments of the former volumes. It must indeed be acknowledged, that fishes admit of little ornament. Their attractions, in their native waters, arise from the brilliancy of their colouring, and the spirit and picturesque beauty of their attitudes. They must, in general, be copied from specimens long since dead, where the motion can give no variety, and where the beautiful tints must have been long since tarnished. A few hours, and indeed, in many instances, a few minutes, will change the delicate colour of a living fish: and, though Bloch has well preserved the hues of some species, he has in many others greatly failed. In some Chinese drawings only have we seen the exquisite colouring of fishes preserved with apparently undiminished lustre.

The introduction is short, and, we think, unsatisfactory. It contains the anatomy of fishes, chiefly from Dr. Monro: even the introductory remarks of Linnæus would have furnished some additional facts. Why, for instance, was the *membrana nictitans* omitted? We know not, that a naturalist should engage in a physiological account of the functions of the animals he describes: in general, it would be impossible: but it would have occasioned little delay, if some of those, intimately connected with the parts, had been noticed. When speaking of the air-bladder, and observing that the complete theory of its operation has not been yet explained, it might have been noticed, that its contents are found to be, in general, azotic gas, and that it is probably an excrementitious fluid injurious to the circulating mass, and consequently deposited in a vessel, where it may be of service by adding to the buoyancy of the fish. The animal, at a suitable period, has undoubtedly a power of discharging it, or its accumulation would be injurious; nor could it constantly remain without experiencing some alteration. When speaking moreover of the advantages arising from the pressure of the operculum on the gills, Dr. Shaw might have mentioned the probability of its assisting the decomposition of the water, on the absorption of the air which it holds either mechanically mixed, or dissolved in it. There is indeed little reason to suppose, that any decomposition of the water takes place; since fishes will die, if the air be, for a long time, excluded. It

is not, however, our object to engage in physiological discussions; we must follow the author.

In the first genus of the apodes, Dr. Shaw has departed from the conduct of Linnæus, in separating the eels from the murænæ. His genus *anguilla* comprises the common eel, the conger, the spotted eel (*muræna ophis*), the sea snake, included by Linnæus under the same species, and the Rondeletian eel, *M. myrus*.

The *muræna* is chiefly distinguished, as a genus, by the want of pectoral fins, and the spiracle on *each* side of the neck. It contains the other species of *murænæ* from Linnæus; three species of *gymnothorax*, viz., *G. catenatus*, *reticularis*, and *afer*, from Bloch; the zebra *muræna*, (zebra *gymnothorax* from the Naturalist's Miscellany); and the green *muræna*, the American sea snake of Seba, which is either a *muræna*, or a *symbranchus*.

The next genus, *symbranchus*, was formed by Bloch: it greatly resembles the *muræna*, and differs only in the spiracle being single. It contains the two species of Bloch. The genus that follows was also formed by the Prussian naturalist, styled the *spagebranchus*, for a single species, distinguished from the *symbranchus* by two spiracles under the neck. Dr. Shaw thinks that the *muræna cæca* of Linnæus is an individual of this species.

The genus *monopterus*, with its single species, is introduced from La Cépède, and it is followed by the *gymnotus*, a Linnæan genus. It contains the Linnæan species, with few alterations, and those of little importance. The electric or Galvanic powers of the *G. electricus*, are described from Dr. Garden, and its battery from Mr. Hunter's paper in the Philosophical Transactions. This fish is now a very important object, since it connects Galvanism and electricity with the living and nervous powers.

The *ophidium*, a Linnæan genus, follows; to which our author has added one species, viz. the fifth, described by Dr. Russell, in his 'Aleppo,' under the appellation of *mastacembalus*.

We now begin to lose almost entirely the eel figure, since the *odontognatus*, a genus formed by La Cépède, retains only the long anal fin. It consists but of a single species.

The genus *comephorus*, *L. triurus* of La Cépède, and the *ammodytes* *L.*, follow, with little or no alterations. The *leptocephalus Morrisii*, the Anglesea Morris, was described in the British Zoölogy of Pennant, and is here elegantly figured. The following genus was first noticed by Dr. Shaw himself, in the Linnæan Transactions, and the Naturalist's Miscellany. It is entitled *stylephorus chordatus*, and is a truly singular animal.

In the *trichiurus*, a Linnæan genus, we find the two species described by that naturalist; but the trivial name of the first is changed to *argenteus*, more appropriately descriptive.

The *anarhicas*, or wolf fish, is described at length from Pen-

nant and Bloch; but there is an inaccuracy, or an inconsistency, in the description; for the animal that could bite through a *cut-las*, could not, we think, be taken with a *hook*. The *A. strigosus* of Gmelin is only a variety of the first and most common species.

Under the following genus, the xiphias, we find a new species, the *X. platypterus* from Bloch, who considered it as a tunny, described also in the Naturalist's Miscellany. From our author's account of this fish, we shall select some singular observations.

‘ Some years ago a letter was sent to the president from the captain of an East-Indiaman, accompanied by an account of an astonishing instance of the powerful strength which this fish occasionally exerts; the bottom of the ship having been pierced through by a fish of this species in such a manner that the sword or snout was completely imbedded or driven through almost to its base; the animal having been killed by the violence of the effort. A most singularly fortunate circumstance for the preservation of the vessel, which, had the fish been enabled to have withdrawn its snout, must inevitably have foundered in consequence of the leak. The wood, together with the sword imbedded in it, is now in the British Museum.

‘ This fish is found not only in the Brazilian and East-Indian seas, but also in the northern ocean. It is said to be a great enemy to whales, with which it is reported to have frequent combats. It is remarkable that Pliny mentions the circumstance of the swordfish being able to transfix vessels; which has generally been regarded as one of those exaggerations so frequent in the works of the ancient naturalists: but since the present fish is well known to possess this power, (several other equally well attested accounts having been received within these few years), it is surely no improbable supposition that Pliny, though not conscious of the difference, in reality spoke of this very species, which at that time was doubtless confounded with the common swordfish.

‘ In the arrangement of this animal I have ventured to differ from Dr. Bloch, who, notwithstanding its general appearance, its sword-shaped snout, and other particulars in which it evidently proclaims itself a genuine xiphias, has placed it among the thoracic fishes as a species of the genus scomber, considering the long processes beneath the breast as a kind of pectoral fins. Dr. Bloch seems also to have considered the finny processes above and below the tail, together with the prominences on each side that part, as sufficient to justify his classification of the animal. It may be added that Piso, in his description of this fish, compares its viscera to those of the tunny.

‘ Dr. Bloch informs us that when this species does not exceed the length of about four feet, it is considered as an eatable fish, but is too coarse when it exceeds that length.’ Vol. iv. Part i. p. 102.

The xiphias makaira, short-snouted sword-fish, is the makaira noiratre of La Cépède. The stromateus has three additional species from Bloch, the *S. cinereus*, *argenteus*, and *niger*: but they offer no remark of importance. The stromatei, as our author

justly observes, greatly resemble the chaetodons, but are separated from them, on account of the want of ventral fins. Though this may form an objection to the Linnæan system of ichthyology, 'it would be difficult,' adds Dr. Shaw, 'to prove, that a more natural distribution would lead to a readier investigation of the animals.' The last genus of the apodes, the *sternoptyx*, offers no new observation.

The first genus of the order 'jugulares' is the *callionymus*, to which no species are added. The second also, the *uranoscopus*, contains only the single species allotted to it by Linnæus.

The genus weever (*trachinus* L.), which probably derives its name from *vive*, since like the eel it is very tenacious of life, is augmented by one other species, described by Osbeck, from whom it has been copied into the volumes of *La Cépède*. The gadus follows, an immense group, and of the highest importance as an article of food and commerce, which however requires some farther limitation. We need scarcely add, that it includes the cod, the whiting, and the haddock. From the account of the cod-fishery, we shall select some information offered by our author.

'The boasted mine of this island, (Newfoundland) viz. its sand-bank, is represented as a vast submarine mountain, of above 500 miles long, and near 300 broad, and seamen know when they approach it by the great swell of the sea, and the thick mists that impend over it. The water on the bank is from twenty-two to fifty fathoms; on the outside from sixty to eighty; and on the smaller banks much the same: the increase of shipping that resort to these fertile banks is now unspeakable: our own country still enjoys the greatest share, and ought to be esteemed one of our chiefest treasures, bringing wealth to individuals, and strength to the state. All this immense fishery is carried on by the hook and line only: the principal baits are herring, the small fish called a capelin, the shell-fish called clams, and pieces of sea-fowl; and with these are caught fish sufficient to find employ for fifteen thousand British seamen, and to afford subsistence to a much more numerous body of people at home, who are engaged in the various manufactures which so vast a fishery demands. The fish, when taken, are properly cleaned, salted, and dried, and in this state sent into various parts of the European continent.

'The cod grows to a very large size. Mr. Pennant commemorates a specimen taken on the British coasts which weighed seventy-eight pounds, and measured five feet eight inches in length, and five feet in girth round the shoulders; but the general size, at least in the British seas, is far less, and the weight from about fourteen to forty pounds; and such as are of middling size are most esteemed for the table.' Vol. iv. Part i. p. 133.

'The food of the cod is either small fish, worms, testaceous or crustaceous animals, such as crabs, large welks, &c. its digestion is so powerful as to dissolve the greatest part of the shells it swallows: it is very voracious, catching at any small body it perceives moved

by the water, even stones and pebbles, which are often found in the stomach. The fishermen are well acquainted with the use of the air bladder or sound of this fish, and dexterously perforate the living fish with a needle, in order to let out the air contained in that part; for without this operation the fish could not be kept under water in the well-boats, and brought fresh to market. The sounds, when salted, are reckoned a delicacy, and are often brought in this state from Newfoundland. A species of isinglass is also prepared from this part of the fish by the natives of Iceland.' Vol. iv. Part i. p. 135.

The 'poor' of Pennant's Zoölogy is the *gadus minutus* of our author and of Bloch.

We confess, that we should separate the *beardless* whiting, with its congeneres, from the cod; for, though it resembles the cod in other respects, *its* relatives the pollock, the hake, the ling, &c. greatly differ. The Leverian *gadus* is described from a specimen in the Leverian museum, probably an inhabitant of the Southern Ocean. The burbot, allied to the *murenæ*, might, with great propriety, be comprehended in a genus with the ling, were it beardless; but the obvious beard forbids. The toad *gadus* is properly separated by La Cépède, and forms a new genus. A new species, *gadus brosmæ*, is inserted from the British Zoölogy, where it is styled *torsk*.

The blenny, a well known genus, has its ranks augmented by a species from Bloch, the *B. fasciatus*; three from La Cépède; the *B. saliens* approaching the flying fish; the *B. punctulatus* and *boscianus*; with the trifurcated hake, from Pennant. The *B. raninus* L., with the toad *gadus*, forms the genus *batrachoides* of La Cépède. The *kurtus*, a genus established by Bloch, contains only its single species.

The second part of the fourth volume commences with the thoracici; and the first genus is the *cepola*. The *rubescent cepola*, the second species of our author, is the *ophidium macrophthalmum* of the tenth edition of the System of Nature: but it has been by no means so accurately described, as to enable us to ascertain its exact place. The *C. hermanniana* of Dr. Shaw forms a new genus in the work of La Cépède, under the appellation of *tænoides*, with the same trivial name. It is indeed as nearly allied to the *trichiuri* as to the *cepolæ*.

The next genus, and its first species, are so little known, that we shall select the generic character with the description of the latter.

* GYMNETRUS.

GYMNETRUS.

* Generic Character.

* *Corpus* longissimum, compressum.

* *Dentes* numerosi, subulati.

* *Membr. branch.* 4—5—radiata.

* *Pinna analis* nulla.

* *Body* extremely long, compressed.

* *Teeth* numerous, subulate.

* *Gill-membrane* four or five rayed.

* *Anal fin* wanting.

* ASCANIAN GYMNETRUS.

* *Gymnetrus Ascanii*. *G. argenteus*, corpore longitudinaliter fusco punctato, cirris ventralibus apice dilatatis.

* Silvery gymnetrus, speckled longitudinally with brown points, and with the ventral cirri dilated at the tips.

* *Regalecus glesne*. *Ascan. ic. rer. nat. t. 11.*

* This extraordinary fish seems to have been almost unknown till within the space of a few years past; nor are its characters and history yet so distinctly ascertained as might be wished. It is a native of the northern seas, and seems to have been first described by professor Ascanius in his work entitled *Icones rerum naturalium &c.* The length of the specimen was ten feet, and the diameter, which was equal throughout the whole length, about six inches: the head short, the mouth small, and the eyes rather large: on the upper part of the head, before the commencement of the dorsal fin, were situated seven or eight upright, naked rays or processes, of moderate length: the dorsal fin, which was rather shallow, commenced at a small distance beyond these, and running along the whole length of the back, formed by its continuation the tail-fin, which was carried to a very small distance beneath the body, there being, properly speaking, no vent-fin: the pectoral fins were very small, of a slightly ovate or rounded shape, and situated at a small distance from the head: the ventral fins, if they can be said to deserve the name, consisted of a pair of extremely long single rays or processes terminated by a small ovate expanded tip or finny extremity: the gill-covers appeared to consist of five or six radiated laminae: the colour of the whole body was bright silver, with a blueish cast diffused over the upper part of the back: the lateral line was strongly marked, and ran from the gill-covers to the tail, and the sides of the body were marked by several longitudinal double rows of slightly extant, very small, dusky specks: the forehead was white; the fins pale brown.

* The fish is said to be generally seen either preceding or accompanying the shoals of herrings in the northern seas, for which reason it is popularly known by the title of King of the Herrings.' Vol. iv. Part ii. p. 193.

It is a singular title, 'king of the herrings,' which has itself been occasionally styled the king of fishes. A fish, similar to the above, was taken at Vizagapatam in 1788, and its figure is among Dr. Russell's drawings: that gentleman's account of it we shall add.

* From Dr. Russell's memorandums on this subject, politely communicated during my description of this genus, it appears that no teeth were visible in either jaw, whereas in the Ascanian fish the teeth are expressly said to have been of a subulated form: the opercula consisted of two oblong, flexible, streaked plates: the abdomen was very short, and the vent placed near the head: (in the Ascanian fish it was situated towards the middle of the abdomen.) The caudal fin was not united with the dorsal, and consisted of four rays, connected at the base by a thin membrane, and afterwards joined together and ending in a setaceous thread. The gill-membrane had five rays; the

dorsal fin 320: (in the Ascanian fish, notwithstanding its vast length, there were only 120.) The pectoral fin had eleven rays, the ventral two, and the caudal four*.

'In the British Museum is a dried specimen of a fish which appears to be nearly allied to the preceding, but which is not sufficiently perfect to admit of very exact description: the body is much shorter in proportion: the lateral line extremely strong or distinct: the colour of the whole animal except the fins and processes (which are red), a bright silver; and from the top of the head proceeds a very strong horn-shaped process of the length of several inches, gradually tapering into a slender extremity: the length of this specimen is about four feet and a half, and the breadth about five inches, exclusive of the back fin.' Vol. iv. Part ii. p. 196.

Another species is described from Bloch, the *G. Hawkenii*, which our author styles the Blochian gymnotrus; and another from La Cépède, who referred it to a new genus *regalecus*, with the trivial name of '*lanceolatus*.' Dr. Shaw names it the *Cepedian gymnetrus*; but, though we fully admit the merit of these naturalists, and think that such a compliment was their due, we wish that some unappropriated species had been honoured with the names of Bloch and La Cépède. The term '*lanceolatus*' is too appropriate to be changed; and Hawkins should not have been consigned to oblivion.

The *vandel* is a new genus in ichthyologic systems, termed from its first describer, Vandelli of Coimbra. It greatly resembles the *trichiuri*. Its only species is that found in the Mediterranean and Atlantic, which Vandelli styled *trichiurus ensiformis*. The generic character is, body extremely long, gill-membrane five or six rayed; teeth subulate, those in front largest.

The '*echeñeïs*' (*remora*) is a Linnæan genus; and one new species is added from the description of Mr. Menzies in the Linnæan Transactions. The eloquent and exaggerated account of the power of this fish to retard the course of a vessel, is given in the plain energetic language of Philemon Holland; and Dr. Shaw thinks, that many of these fishes, attached to a light canoe in the early æra of navigation, may have afforded some foundation for the idea. In fact, however, the *remora* swims with little force, and attaches itself sometimes to rocks to prevent its becoming the sport of every wave, sometimes to ships, in order to assist its progress, or to the more ferocious shark, to partake of his prey. In the Mosambic channel, its power of suction is employed in a singular way. A cord is fastened to the tail of the *remora*, which is thrown into the sea when a turtle is seen at

* I must here observe that, (regarding the number of rays in the fins of fishes, and more especially in those which have long and shallow fins, as a character on which no very great dependence is to be placed,) I have not been solicitous to introduce it, except in a few instances, into the present work.'

the bottom: the fish adheres to its under shell, and fixes itself so firmly, that the turtle is drawn up with it.

The coryphæna (dolphin) is also a Linnæan genus, which has employed the imagination and the fancy of the poets. In its native element, the colours of the common dolphin are very beautiful; but they begin to fade the moment the animal is taken from the water, and wholly vanish when it dies. The *C. novacula* seems not to have been inserted in the System of Linnæus; and the *C. chrysurus*, *Scomberoides*, and *Sinensis*, are added from La Cépède.

The macrourus (imminset) is a genus formed by Bloch. It contains only a single species, *viz.* that first described by Egede. In the System of Nature, it forms a species of coryphæna.

The genus gobius has been divided according to the suggestions of La Cépède, formerly explained; and the species now retained are only those in which the ventral fins are united into the form of a funnel. These are the *G. niger*, *lanceolatus*, *minutus*, *Jozo*, *Boddaerti*, *lagocephalus*, *paganellus*, *cruentatus*, *ocellaris*, *Arabicus*, *bicolor*, *nebulosus*, *eleotris*, *Plumieri*, *pectinorostri*, *Schlosseri*, *anguillaris*, *cyprinoides*, *aphya*, and *melanurus* of L. to which are added the *G. Boschii*, *cœruleus*, *Brussonettii*, and *ater*, from La Cépède.

The gobiomorus contains the gobii with the ventral fins distinct, to which the *G. dormitor* and *cephalus* are added from La Cépède. The last indeed, from its resemblance to a pike, our author separates, forming a new genus styled gobiesox.

The bullheads (cottus) are augmented by two species from Commerson's MSS. described by La Cépède, and a doubtful one, described by Dr. Shaw, in White's Journal of a Voyage to New South Wales. The disgusting genus *scorpæna* has, in addition to the Linnæan species, six from La Cépède's work. But though disgusting in appearance, many of the species are edible; and in form approach the dory. The zeus follows, which Quin introduced to the tables of the epicures. Let us add, however, for their sakes, that, if crimped, its flavour is greatly heightened. The dory is the zeus faber of Linnæus and Dr. Shaw: the appellation is from the French, taken from the golden hue mixed with green (*jaune doré*). The three first species, natives of the Indian seas, are of a silvery hue, and of an indifferent flavour. No new species are added.

The pleuronectes also affords many favourite dishes. The turbot and soles are of this genus, with some others of inferior flavour. Among the new species described in this volume, we find the smear dab, first mentioned by Pennant *P. lævis*; *P. roseus* from the seventh volume of the Naturalist's Miscellany; the silver sole, *P. argenteus* from Petiver; *P. diaphanus*, transparent sole, from Pennant; *P. barbatus* from Gronovius; and two from La Cépède. This author has, in Dr. Shaw's opinion, unneces-

sarily separated the marbled, the pavonian, the lineated, bilineated, and one other species, from the pleuronectes, under a genus styled achirus from their wanting pectoral fins. So far from thinking this separation unnecessary, we could wish that the genus were still farther divided. It is now, by far, too artificial, and, we think, too numerous. Some of the species of former authors are, in this volume, considered as varieties only, particularly the *P. lunatus* and *mancus*. Some others might perhaps, with propriety, be reduced to the same station. The *P. passer*, on the contrary, supposed by Pennant to be a variety, is here considered as a species. Of the new species, we must mention one from Bloch, *P. macrolepidotus*, and one from Pallas, *P. stellatus*.

The *chætodon* in Linnæus' System, forms a genus somewhat artificial, and very numerous. Several of the species are now removed into another group, styled *acanthurus*. The distinction consists in the teeth, which, in the *chætodon*, are flexile and setaceous; in the *acanthurus*, moderately broad and strong. In the latter also, a strong spine on each side of the tail is observable. The *chætodon* is, in general an inhabitant of the Indian and American seas: and to the Linnæan species are added, the angel fish from Catesby, the *C. Suratensis*, Kleinii, *bimaculatus*, *ocellatus*, *orbis*, *faber*, *setifer*, *falcula*, *aruanus*, *Chinensis*, *maculatus*, *biaculeatus*, *aureus*, *rhomboides*, *marginatus*, *guttatus*, *pavo*, *Curassao*, *Bengalensis*, *saxatilis*, *Maurissii*, *unimaculatus*, and *Plumieri* from Bloch; *C. enceladus* and *albescens* from the Naturalist's Miscellany; *C. constrictus* from the New Holland Zoölogy; and the *C. trifasciatus* from Park in the Linnæan Transactions. The *C. lunulatus* of Dr. Shaw is referred, by Cépède, to the *pomacentrus*, with the trivial name of *croissant*; the *C. geometricus* to the *holocanthus*, and the *C. plectorhincus* to a genus of that name. The only new species of *chætodon* from La Cépède are the *C. sargoides* and *La Marck*.

The genus *acanthurus* is formed, in part, by Dr. Shaw. The species are the *unicornis* (*nason licornet* of La Cépède), *nasus* (*nason loupe C.*), *teuthis* (*T. hepatus L.*; but the whole genus of *teuthis* is now absorbed in the *chætodons* and *acanthuri*), *chirurgus* (*C. chirurgus* of Bloch), *nigricans* (*C. nigricans L.* and *B.*); *militaris*, a new species in the Leverian collection; *triostegus*, *C. triostegus L.*; *harpurus*, a new species from the British Museum; *sohal*, *C. sohal* of Forskal; *nigro-fuscus*, described under the same appellation by Forskal; *lineatus*, *C. lineatus L.*; *umbra-tus* and *meleagris*, new species; and *velifer* from Bloch.

The *tricopus* is a genus formed from the *osphronenius* and *tricopodus* of La Cépède: they are at least very nearly allied, by the very great length of one ray of the ventral fins, which extends sometimes even beyond the body. We think Dr. Shaw has too hastily introduced the *monodactylus falciformis* under

this genus; nor is the *labrus tricopterus* L., with perfect propriety united with the other species of *tricus*. In general, we prefer the error of making the genera too numerous, to their being too comprehensive and crowded.

The *scarus* is not a Linnæan genus: the species are chiefly from Forskal and Bloch, with the addition of the *ostorinchus* Fleurieu from La Cépède.

The *sparus* is nearly allied to the *labrus*; and the species have never been accurately distinguished. We shall not therefore enlarge on it. We find numerous additional species from Bloch, but of too little importance, and too imperfectly described, to detain us. We find also several of the *percæ*, and one of the *sciænæ* L., introduced among the species. The *harpé bleudoré* of La Cépède Dr. Shaw supposes to be the *sparus falcatus* of his system, the *S. tetracanthus* of Bloch. Some species of the *labrus* of Linnæus and Bloch, of the *anthias* of Bloch, of the *lutianus* of La Cépède and Bloch, with several new species from the Linnæan Transactions, are introduced, but with what propriety, we cannot now inquire. The whole genus requires the attentive eye of some monographer; for much confusion still prevails in it.

The *gomphosus*, a genus established by La Cépède from the MSS. of Commerson, contains two species only; and the *labrus*, which follows, is in scarcely less confusion than the *sparus*. We need not enlarge on it, and shall only remark, that Dr. Shaw seems to have collected with great accuracy whatever former authors and the museums under his own eye could furnish. Like the species of the *picæ* among birds, those of the *labri* and *spari* are numerous, scarcely susceptible of accurate distinction, and truly insignificant.

The *ophicephalus* and *conchurus* are genera established by Bloch; and contain, the former two edible species, the latter one only: they resemble the *sciænæ*. The genus *sciæna*, though established by Linnæus, is chiefly filled by the labours of Bloch and Forskal. The *percæ* are better known, and more valuable; but we find no addition to the species.

The *holocentrus* is a genus established by Bloch; but its ranks are filled from the *percæ* and *sciænæ* of Linnæus, among which we trace some new species. The greater number are however from Bloch, among which Dr. Shaw has added some species from the *epinephelus* of the same naturalist. The *bodianus* is a genus of Bloch: among its species we perceive two or three of *percæ* and one of *sparus* L.

The *scomber* of Linnæus is the well known fish, the mackarel. As our article is already far extended we shall not enlarge on its new species, which are not very numerous, but add some interesting observations respecting its supposed migrations, from the work before us.

' This beautiful fish is a native of the European and American seas ; generally appearing at stated seasons, and swarming, in vast shoals, round particular coasts. Its great resort however seems to be within the Arctic circle, where it resides in innumerable troops, grows to a larger size than elsewhere, and is supposed to find its favourite food, consisting chiefly of marine insects, in far greater plenty than in warmer latitudes. During the severity of the northern winter it is said to lie imbedded in the soft mud, beneath the vast crusts of ice surrounding the polar coasts ; being thus sufficiently protected from the effects of frost ; and, on the return of spring, is generally believed to migrate in enormous shoals, of many miles in length and breadth, and to visit the coasts of more temperate climates, in order to deposit its spawn. Its route has been supposed nearly similar to that of the herring ; passing between Iceland and Norway, and proceeding towards the northern part of our own island, where a part throws itself off into the Baltic, while the grand column passes downwards, and enters the Mediterranean through the straits of Gibraltar.

' This long migration of the mackrel, as well as of the herring, seems at present to be greatly called in question : and it is thought more probable that the shoals which appear in such abundance round the more temperate European coasts, in reality reside during the winter at no very great distance ; immersing themselves in the soft bottom, and remaining in a state of torpidity ; from which they are awakened by the warmth of the returning spring, and gradually recover their former activity. At their first appearance their eyes are observed to appear remarkably dim, as if covered with a kind of film, which passes off as the season advances, when they appear in their full perfection of colour and vigor.' Vol. iv. Part ii. p. 577.

The tunny is a species of scomber ; and the tunny-fishery is an object of great importance in the Mediterranean.

The gasterosteus, the stickleback, is a minute and beautiful fish well known. It often appears in vast numbers, and is very destructive to the young fry of larger fishes. We find little novelty among its species. Of the mullet, we observe some new species from Forskal and Dr. Russell, La Cépède and Bloch. The gurnard, trigle, is a fish well known ; but there are a few species added from Bloch and La Cépède. The last genus of the thoracici is the trachichthys, of which there is only one species, the australis, already described in the Naturalist's Miscellany.

(To be continued.)

ART. II.—Taylor's Plato. (Concluded from p. 19 of our present Volume.)

IN our preceding pages we have spoken so fully of the style and manner in which this work is executed ; we have substantiated by such ample, and, we trust, satisfactory evidence the sentence which we found ourselves in conscience bound to pronounce upon it ; that we deem it unnecessary to assert any thing

farther of the want both of dignity and fidelity so conspicuous in those parts of it which have proceeded from Mr. Taylor. It only remains, therefore, for us to examine the notes, by which the bulk of these volumes has been considerably increased; and to notice the labours of the late Floyer Sydenham.

Those who know nothing of the former gentleman but the epithet '*celebrated Platonist*,' an epithet whose novelty alone could, we think, have excited the attention it appears to have done,—those, we say, will expect to find the most profound knowledge of Plato's writings displayed in these notes, and the most learned explanations of every difficulty that occurs in them. Such, however, as have formed this opinion, will probably find themselves disappointed on consulting these volumes. They will find indeed all the dreams of the allegorising philosophers, all the far-fetched and fanciful doctrines of Proclus and his associates; but they will look in vain for sound judgement and accurate reasoning. They will see some of the wildest chimæras that ever entered the human mind, considered by Mr. Taylor as most important truths; and they will discover that Plato's meaning, according to this scheme of things, is not less abstruse and mysterious than the *Ægyptian hieroglyphics*. Many conceived Hutchinson to have indulged fancy to its full extent, when he looked into the sacred volume for a complete system of philosophy. But he is far outstripped by the disciples of the Platonic school, who can find in their master's writings all the knowledge that is worth attaining.

We had always thought the sentiments of a great and civilised people entitled to some respect; more especially when those sentiments were not peculiar to them, but were maintained and defended by some of the wisest and best men of the wisest and most enlightened nations: we had learned (such was the folly of ourselves or our teachers) to distrust our own opinions, when opposed by the united voice of great and able men, who were anxious for the discovery of truth, and equally interested with ourselves to determine on which side it lay. Not so Mr. Taylor. He has been educated in a very different school—a school from which diffidence is banished, and in which confidence has fixed its seat. We are led to this remark by the following observations of Mr. Taylor, in which he seems eagerly to have embraced an opportunity of showing his inveteracy against Christianity and its professors, whose '*barbaric, modern, and Galilean*' spirit he looks on, we suppose, and not without reason, as presenting a powerful impediment to the reception of his favourite philosophy and attendant paganism. In a note on a passage of the *Cratylus*, Vol. 5. p. 507, of the translation, Mr. Taylor says,

'Heaven, which is here characterised by sights, is the heaven which Plato so much celebrates in the *Phædrus*, and composes that order of

gods which is called by the Chaldean oracles *νοητος και νοερος, i. e. intelligible and at the same time intellectual*. This will be evident from considering that Plato, in what follows, admits with Hesiod, that there are gods superior to heaven, such as Night, Chaos, &c. But as sight corresponds to intelligence, and this is the same with that which is both intelligible and intellectual, and as Saturn is the summit of the intellectual order, it is evident that heaven must compose the middle order of gods characterised by intelligence, and that the order above this must be entirely intelligible. *In consequence of all this, what must we think of their system who suppose Heaven, Saturn, and Jupiter, and indeed all the gods of the ancients, to have been nothing more than dead men deified, notwithstanding the above etymologies, and the express testimony of Plato to the contrary in the *Timeus*, who represents the demiurgus commanding the subordinate gods, after he had produced them, to fabricate men and other animals? For my own part, I know not which to admire most, THE IGNORANCE, THE IMPUDENCE, OR THE IMPIETY OF SUCH ASSERTIONS. ALL THAT CAN BE SAID IS, THAT SUCH OPINIONS ARE TRULY BARBARIC, MODERN, AND GALILÆAN.*

We entertain no doubt that our readers will be wonderfully struck by Mr. Taylor's convincing arguments. He is proving, it will be observed, the excellence of the theology of the ancients, and refuting the folly of those who consider their gods as dead men deified. How is this done? By telling us what one of its votaries thought. This surely is a new mode of reasoning, and a new system of logic. In future, when disputing about the truth of Christianity, we have only to say St. Paul affirmed it to be true; and our *adversaries*, no doubt, will be silenced and convinced! But to be serious; what shall we think of one who has not only ventured to recommend to the world a system which time and superior knowledge have overthrown, but has dared to call all that differ from him in sentiment, FOOLS, GOTHs, and GALILÆANS? We can assure him that the Christian is not to be *railed* out of his religion, that the term *Galilean* betrays only the rage and venom of the writer, and that the only sentiments which such remarks occasion are those of pity and wonder—pity, that a man should have devoted to such absurd subjects an industry that might have been converted to useful purposes; wonder, that in recommending tenets so opposite to the feelings of mankind, he did not see the propriety of substituting argument for abuse. But perhaps we ought to wonder at nothing that can flow from the pen of that man who has not only had the *modesty* to believe himself the only enlightened person that has lived within the last thousand years, but has even avowed that belief, and published it to the world.

Yet let us proceed to give a further specimen of the sort of fare which the reader is to expect in the notes under consideration. We will take one from the same dialogue; it occurs at page 522, Vol. 5.

* For an accurate and beautiful account of these four powers of the

sun, and his nature in general, let the Platonic reader attend to the following observations extracted from Proclus, on Plato's theology and on the Timæus, and from the emperor Julian's oration to this glorious luminary of the world. To a *truly modern* reader, indeed, it will doubtless appear absurd in the extreme to call the sun a god; for such regard only his visible orb, which is nothing more than the vehicle (deified as much as is possible to body) of an intellectual and divine nature. One should think, however, reasoning from analogy might convince even a careless observer that a body so transcendently glorious and beneficent, must be something superior to a mere inanimate mass of matter. For if such vile bodies as are daily seen moving on the face of the earth are endued with life (bodies whose utility to the universe is so comparatively small) what ought we to think of the body of the sun! *Surely that its life is infinitely superior not only to that of brutes but even to that of men: for unless we allow that as body is to body so is soul to soul, we destroy all the order of things, and must suppose that the artificer of the world acted unwisely and even absurdly in its fabrication. And from hence the reader may perceive how necessarily impiety is connected with unbelief in ancient theology.* But to begin with our account of the powers and properties of this mighty ruler of the world:

‘The fontal sun subsists in Jupiter, the perfect artificer of the world, who produced the hypostasis of the sun from his own essence. Through the solar fountain contained in his essence, the demiurgus generates solar powers in the principles of the universe, and a triad of solar gods, through which all things are unfolded into light, and are perfected and replenished with intellectual goods; through the first of these solar monads participating unpolled light, and intelligible harmony; but from the other two, efficacious power, vigour, and demiurgic perfection. The sun subsists in the most beautiful proportion to the good: for as splendour proceeding from the good is the light of intelligible natures, so that proceeding from Apollo is the light of the intellectual world: and that which emanates from the apparent sun, is the light of the sensible world. And both the sun and Apollo are analogous to the good; but sensible light and intellectual truth are analogous to superessential light. But though Apollo and the sun subsist in wonderful union with each other, yet they both inherit a proper distinction and diversity of nature. Hence by poets inspired by Phœbus, the different generative causes of the two are celebrated, and the fountains are distinguished from which their hypostasis is derived. At the same time they are described as closely united with each other, and are celebrated with each other's mutual appellations: for the sun vehemently rejoices to be celebrated as Apollo; and Apollo when he is invoked as the sun, benignantly imparts the splendid light of truth. It is the illustrious property of Apollo to collect multitude into one, to comprehend number in one, and from one to produce many natures; to convolve in himself, through intellectual simplicity, all the variety of secondary natures; and, through one hyparxis, to collect into one, multiform essences and powers. This god, through a simplicity exempt from multitude, imparts to secondary natures prophetic truth; for that which is simple, is the same with that which is true: but through his liberated essence he imparts a purifying, unpolled and preserving power; and his emission of

arrows is the symbol of his destroying every thing inordinate, wandering, and immoderate in the world. But his revolution is the symbol of the harmonic motion of the universe, collecting all things into union and consent. And these four powers of the god may be accommodated to the three solar monads, which he contains. The first monad * therefore of this god is enunciative of the truth, and of the intellectual light which subsists occultly in the gods. The second † is destructive of every thing wandering and confused; but the third ‡ causes all things to subsist in symmetry and familiarity with each other through harmonic reasons. And the unpolluted and most pure cause, which he comprehends in himself, obtains the principality, illuminating all things with perfection and power, according to nature, and banishing every thing contrary to these.

‘Hence, of the solar triad, the first monad unfolds intellectual light, enunciates it to all secondary natures, fills all things with universal truth, and converts them to the intellect of the gods; which employment is ascribed to the prophetic power of Apollo, who produces into light the truth contained in divine natures, and perfects that which is unknown in the second orders of things. But the second and third monads are the causes of efficacious vigour, demiurgic affection in the universe, and perfect energy, according to which these monads adorn every sensible nature, and exterminate every thing indefinite or inordinate in the world.

‘And one monad is analogous to musical fabrication, and to the harmonic providence of natures which are moved. But the second is analogous to that which is destructive of all confusion, and of that perturbation which is contrary to form and the orderly disposition of the universe. But the third monad which supplies all things with an abundant communion of beauty, and extends true beatitude to all things, bounds the solar principles, and guards its triple progression. In a similar manner likewise, it illuminates progressions with a perfect and intellectual measure of a blessed life, by those purifying and pæonian powers of the king Apollo, which obtain an analogous principality in the sun. The sun is allotted a supermundane order in the world, an unbegotten supremacy among generated forms, and an intellectual dignity among sensible natures. Hence he has a twofold progression, one in conjunction with the other mundane gods, but the other exempt from them, supernatural and unknown. For the demiurgus, according to Plato in the *Timæus*, enkindled in the solar sphere a light unlike the splendour of the other planets, producing it from his own essence, extending to mundane natures, as it were from some certain secret recesses, a symbol of intellectual essences, and exhibiting to the universe the arcane nature of the supermundane gods. Hence when the sun first arose, he astonished the mundane gods, all of whom were desirous of dancing round him, and being replenished with his light. The sun, too, governs the twofold co-ordinations of the world, which co-ordinations are denominated hands by those who are skilled in divine concerns, because they are effective, motive, and demiurgic of the universe. But they are considered as twofold; one the right hand, but the other the left.

* I. e. Mercury.

† Venus.

‡ Apollo.

' As the sun by his corporeal heat draws all corporeal natures upwards from the earth, raising them and causing them to vegetate by his admirable warmth ; so by a secret, incorporeal, and divine nature, resident in his rays, he much more attracts and elevates fortunate souls to his divinity. He was called by the Chaldeans, the seven-rayed god : and light, of which he is the fountain, is nothing more than the sincere energy of an intellect perfectly pure, illuminating in its proper habitation the middle region of the heavens : and from this exalted situation scattering its light, it fills all the celestial orbs with powerful vigour, and illuminates the universe with divine and incorruptible light.

' The sun is said to be the progeny of Hyperion and Thea ; signifying by this that he is the legitimate progeny of the supereminent god, and that he is of a nature truly divine. This god comprehends, in limited measures, the regions of generations, and confers perpetuity on its nature. Hence, exciting a nature of this kind with a sure and measured motion he raises and invigorates it as he approaches, and diminishes and destroys it as he recedes : or rather he vivifies it by his progress, moving and pouring into generation the rivers of life. The sun is the vivifying medium of the apparent and mundane gods, and of the intelligible gods that surround the good. So far as the sun contains in himself the principles of the most beautiful intellectual temperament, he becomes Apollo, the leader of the Muses ; but so far as he accomplishes the elegant order of the whole of life, he generates Esculapius in the world, whom at the same time he comprehended in himself prior to the world : and he generates Bacchus through his containing the cause of a partial essence and divisible energy. The sun, too, is the cause of that better condition of being belonging to angels, dæmons, heroes, and partial divine souls, who perpetually abide in the reason of their exemplar and idea, without merging themselves in the darkness of body. As the sun quadruply divides the three worlds, *viz.* the empyrean, the æthereal, and the material, on account of the communion of the zodiac with each ; so he again divides the zodiac into twelve powers of gods, and each of these into three others : so that thirty-six are produced in the whole. Hence a triple benefit of the graces is conferred on us from those circles, which the god, quadruply dividing, produces, through this division, a quadripartite beauty and elegance of seasons and times. Monimus and Azizus, *viz.* Mercury and Mars, are the attendants of the sun, in conjunction with whom they diffuse a variety of goods on the earth. The sun loosens souls from the bands of a corporeal nature, reduces them to the kindred essence of divinity, and assigns them the subtle and firm texture of divine splendour, as a vehicle in which they may safely descend to the realms of generation. And lastly, the sun being supermundane, emits the fountains of light ; for among supermundane natures, there is a solar world and total light : and this light is a monad prior to the empyrean, æthereal, and material worlds.

' I only add, that it appears from the last chapter of the fourth book of Proclus on Plato's Theology, that the celebrated seven worlds of the Chaldeans are to be distributed as follows : One empyrean ; three æthereal, situated above the innerratic sphere ; and three

material, consisting of the inerratic sphere, the seven planets, and the sublunary region. For after observing, that of the comprehending triad of gods, one is fiery or empyrean, another æthereal, and another material, he inquires why the gods called Teletarchs, or sources of initiation, are distributed together with the comprehending gods? To which he replies, "Because the first, on account of his possessing the extremities, governs like a charioteer the wing of fire. But the second, comprehending the beginning, middle, and end, perfects æther, which is itself triple. And the third, comprehending according to one union a round, right-lined, and mixed figure, perfects unfigured and formless matter: by a round figure forming that which is inerratic and the first matter: but by a mixed figure, that which is erratic and second matter; for there (that is, among the planets) circumvolution subsists: and by a right-line figure, a nature under the moon, and ultimate matter." From this passage it is evident that both Patricius and Stanley were mistaken, in conceiving the meaning of the account given by Psellus (in his summary exposition of the Assyrian dogmata) of these seven worlds; which, when properly understood, perfectly corresponds with that of Proclus, as the following citation evinces: 'Επτα δὲ φασὶ κοσμοὺς σηματικούς. Ἐμπύρον ἓνα καὶ πρῶτον. Καὶ τρεῖς μεθ' αὐτὸν αἰθερίους, ἐπειτα τρεῖς ὑλικοὺς, τὸ ἀπλανές, τὸ πλανώμενον, καὶ τὸ ὑπὸ σελήνην. "They assert that there are seven corporeal worlds; one empyrean and the first; after this three æthereal worlds; and last of all, three material; the inerratic sphere, the planetary system, and the sublunary region." But Patricius and Stanley conceived the passage as if the three æthereal and three material worlds were distributed by the Assyrians into the inerratic sphere, the planets, and the sublunary world. It is likewise worthy of observation, that the Assyrians, as we are informed by Julian in his Hymn to the Sun, considered that luminary as moving beyond the inerratic sphere, in the middle of the seven worlds; so that the sun, in consequence of this dogma, must revolve in the last of the æthereal worlds.'

After this account of the sun, which is as '*accurate and beautiful*' as it is '*plain and intelligible*,' we must certainly confess the superiority of the Platonic theology. Surely our 'souls must be attracted' by the divinity of Mr. Taylor, and since this 'sun' of wisdom has arisen amongst us gross and 'mundane' creatures, and has condescended to unfold to us these 'arcane dogmas,' we must be unquestionably 'astonished,' and certainly be 'desirous of dancing around him, and of being replenished with his light.' After the confident manner in which this gentleman, with his predecessors Proclus, Jamblichus, and Porphyry, speak of the 'Apollon, Mercurys, erratic, and inerratic spheres, &c.'

Who from celestial origine

Derive themselves in a right line,

we cannot doubt of his having been prime minister or privy counsellor to the demiurgus: or, at least, we must suppose him, like Mohammed of old, to have been favoured by a

special messenger who brought to him these tidings from the invisible world: for certainly without such intelligence, if all the absurdities that himself, Proclus, and others of the Academic spawn, have written, had been as true as they are false, had been as probable as they are ridiculous, how could these *wise folk* have been assured of them? But perhaps we are unjust to Mr. Taylor's talents—he is probably possessed of a happy memory: he may recollect all that happened unto him before he came into the body: he may have been favoured with a sight of the empyrean world, &c. and he may have been honoured with an introduction to those condescending deities Jupiter, Bacchus, and Apollo,

From whose divine illumination
He stole his pagan revelation.

Under either of these suppositions he may have been assured of the truths contained in this sublime edifying note, and may understand them too; we, however, who have not been 'attracted by the sun,' no, nor even by his sister, Luna, and who cannot therefore claim the distinguished privilege of being *planet-struck*, or *lunatics*, are totally unable to comprehend them; and, what is worse than all, we fear that our readers labour under the like misfortune.—We beg Mr. Taylor's pardon: we had forgotten one expression in the former part of the note, which is intelligible enough, and for which we cannot be too thankful; AS BODY IS TO BODY, SO IS SOUL TO SOUL. What an important discovery is here communicated to the world! Emperors, kings, and critics, no longer hesitate in measuring the abilities of different men: politicians, cease your disputes about the talents of Fox or Pitt. Send only for a pair of scales, and weigh them against each other. Do by them as Homer represents Jupiter to have done; and he who kicks the beam must confess his inferiority. Of one thing the modern reader may, with us, desire to be informed, what is the *maximum* and *minimum* of deification. Perhaps Mr. Taylor has a method of fluxions by which he can determine the problem; and, in such case, we hope he will favour the world with this new branch of science.

And here the reader who is unacquainted with the writings of Plato, will ask, if it be in consequence of such trifling that this philosopher has been called divine. We can assure him that it is not: we can assure him that these follies have, with little exception, been fathered upon him by fanatics professing themselves his disciples, and who wished to find in him what he never professed to possess—complete information upon every question: in consequence of this, they have so twisted and turned his meaning, that, could the sage peruse their comments, he would stare as wildly as the rustic did at his son, and ask in amazement, 'Is this my son Tom?' But to leave Mr. Taylor's

'monads and Apollo, and astonished mundane gods dancing around the sun when he first arose;' to leave also his 'dæmons, heroes, and angels who perpetually abide in the reason of their exemplar and idea;' what will the reader think of his sagacity, when we tell him that Mr. Taylor has settled in a few lines what has occupied the wits and the pens of the most learned without having been brought to a final conclusion? No less than the existence of the Trojan war has this Briareus demolished, in his own opinion at least, by a single blow. Let us report what he says, producing first the passage on which all his convincing arguments depend. It occurs in the *Phædrus*, Vol. 3, p. 312, of the present translation.

'But there is,' says Plato, 'an ancient purification for those who offend in matters respecting mythology which *Homer* did not perceive, but which was known to *Stesichorus*. For being deprived of his eyes through the accusation of *Helen*, he was not like *Homer*, ignorant of the cause of his blindness, but knew it as being a musician. So that he immediately composed the following lines:

'False was my tale; thou ne'er across the main
In beauteous ships didst fly, *Troy's* lofty tow'rs to gain.

'And having thus composed a poem directly contrary to what he had before published, and which is called a recantation, he immediately recovered his lost sight.'

On this passage Mr. Taylor thus comments.

'From hence it is evident that the narration of the rape of *Helen*, and of the Trojan war, is entirely mythological, concealing certain divine truths under the symbols of fable. But as this account of *Stesichorus* and the fable of the *Iliad* is beautifully explained by *Proclus* on *Plato's Republic*, p. 393, I shall present the reader with the following epitomised translation of his comment. " *Stesichorus*, who considered the whole fable of *Helen* as a true narration, who approved the consequent transactions and established his poetry accordingly, with great propriety suffered the punishment of his folly, that is, ignorance: but at length, through the assistance of music, he is said to have acknowledged his error; and thus, through understanding the mysteries concerning *Helen* and the Trojan war, to have recovered his sight. But *Homer* is said to have been blind, not on account of his ignorance of these mysteries, as *Stesichorus*, but through a more perfect habit of the soul, i. e. by separating himself from sensible beauty, establishing his intelligence above all apparent harmony, and extending the intellect of his soul to unapparent and true harmony. Hence he is said to have been blind, because divine beauty cannot be usurped by corporeal eyes. On this account, fables bordering upon tragedy represent *Homer* as deprived of sight on account of his accusation of *Helen*. But fables, in my opinion, intend to signify by *Helen* all the beauty subsisting about generation, for which there is a perpetual battle of souls, till the more intellectual having vanquished the more irrational forms of life, return to that place from which they originally

came. But, according to some, the period of their circulation about sensible forms consists of ten thousand years, since a thousand years produce one ambit as of one year. For nine years therefore, *i. e.* for nine thousand years, souls revolve about generation; but in the tenth, having vanquished all the barbaric tumult, they are said to return to their paternal habitation." Note 3.

Hushed then be every dispute, and let all confess their obligations to the sagacity of Mr. Taylor. Who, after so conclusive a chain of argumentation, shall dare to stand forth the champion of the Trojan war? What audacity are such critics as MM. Chevalier, Chandler, and Gell, guilty of, in contending for the existence of this war!—and how useless the labour of Mr. Bryant, in denying it! Plato has said, (and who shall be hardy enough to contradict what Plato has affirmed?) that Stesichorus lost his sight for affirming Helen to have gone to Troy, and recovered it again immediately upon his recantation. A miracle was thus wrought in condemnation of the story; and who will refuse his credit to a miracle? But stop—not quite so fast; no miracle was wrought, say Proclus and Mr. Taylor: Stesichorus was not blind; and Plato is only joking. Stesichorus first of all believed the Trojan war to have really taken place; he was then allegorically blind. He afterwards changed his opinion, and believed there was no truth in the story; he then allegorically received his sight! So that at last we descend from a miracle, wrought in condemnation of the story, to this simple fact: Stesichorus *once thought* the Trojan war to have been a real history, but afterwards *thought otherwise*. The whole force of the argument may be comprehended in this syllogism:—

If a man in the course of his life have two different opinions upon any subject, the last opinion that he has formed upon it *must be true*:

Stesichorus had two opinions about the Trojan war, and his last opinion was that it never did exist:

The Trojan war therefore never did exist.—After so *irrefragable* an argument, it certainly *must be evident* that the rape of Helen is *mythological*: and we must be inconceivably dull; for to us it appears that Mr. Taylor's reasons are more flimsy than a spider's web; and that, when he values himself upon having decided the point, he has not written one iota to the purpose.

— ἐρυσσάμενος ἥϊκος ἀργυρόηλον

Πλῆξεν ἀνασχόμενος κέρυθος φάλον· ἀμφὶ δ' ἄρ' αὐτῷ
Τριχῆά τε καὶ τετραχῆά διατρύφειν ἔκπεσε χεῖρος *.

The above note affords, too, a very convincing proof of the happy art of making '*quodlibet ex quolibet*,' which these Platonists possess. Poor Homer, forsooth, must be converted into a store-house of mysteries; his contest between the Greeks and Trojans

* Hom. Il. Γ. 361.

turned into 'a perpetual battle of souls, till the more rational, having vanquished the more irrational forms of life, return to that place whence they originally proceeded! But what argument have we of this? None. Mr. Taylor and Mr. Proclus say so; and their assertion is, in their own opinions, we suppose, better than ten thousand arguments. Peter vows that 'the bread is very good bread, and very good meat, and very good wine too:' and who shall contradict him? Let Martin do it at his peril. Homer and Stesichorus are both blind, and both blind for the same thing—asserting the rape of Helen. But Homer's blindness is symbolical of a knowledge of the mysteries, Stesichorus's of his ignorance of them. How is this proved? Just as before. Brutus says so; 'and Brutus is an honourable man.' We cannot resist the temptation of applying to such writers the following very apposite description of Butler.

— He was a shrewd philosopher,
And had read ev'ry text and gloss over;
Whate'er the crabbed'st author hath,
He understood by implicit faith.—
He could reduce all things to acts,
And knew their nature by abstracts;
Where Entity and Quiddity,
The ghosts of defunct bodies, fly;
Where truth in person does appear,
Like words congeal'd in northern air.—
A second *Thomas*; or, at once
To name them all, another *Dunce*.—
For he a rope of sand could twist
As tough as learned *Sorbonist*.
And weave fine cobwebs, fit for scull
That's empty when the moon is full;
Such as take lodgings in a head
That's to be let unfurnished.

We could gratify the reader with many other notes of a nature equally improving; but we are induced to think he would not thank us for them. We turn, therefore, to Mr. Sydenham's part of the performance. Upon this it will be unnecessary for us to dwell, as the public are already acquainted with its merits, to which, indeed, Mr. Taylor has borne his testimony in a manner that does him credit; and we feel great pleasure in presenting to our readers the eulogium which he has passed upon his friend. After mentioning the dialogues translated by Mr. Sydenham, he thus proceeds:

'I have already observed, and with deep regret, that this excellent, though unfortunate scholar, died before he had made that proficiency in the philosophy of Plato which might have been reasonably expected from so fair a beginning. I personally knew him only in the decline of life, when his mental powers were not only considerably

impaired by age, but greatly injured by calamity. His life had been very stormy: his circumstances, for many years preceding his death, were indigent; his patrons were by no means liberal, and his real friends were neither numerous nor affluent. He began the study of Plato, as he himself informed me, when he had considerably passed the meridian of life, and with the most unfortunate prejudices against his best disciples, which I attempted to remove, during my acquaintance with him, and partly succeeded in the attempt; but infirmity and death prevented its completion. I have been under the necessity of examining, and comparing with the original, all those parts of the dialogues which he translated, that are more deeply philosophical, or that contain any thing of the theology of Plato. His translation, however, of other parts which are not so abstruse, are [*is*] excellent. In these, he not only presents the reader faithfully with the matter, but likewise with the genuine manner of Plato. The notes too, which accompany the translation of these parts, generally exhibit just criticism, and extensive learning, an elegant taste, and a genius naturally philosophic. Introd. p. cvi.

To the commendatory parts of the above paragraph we are ready to give our assent: nor is the gratification which we have experienced from Mr. Sydenham's translation, diminished by his *supposed* ignorance of the Platonic theology, and his want of confidence in *his best disciples*. But we restrain ourselves; and, for the sake of those among our readers who may not be acquainted with Mr. Sydenham's publications, we give the following specimen of the style in which his translation is executed, taken from the close of the dialogue called 'The First Alcibiades.'

'*Soc.* We, therefore, were not at all right in admitting, as we did just now, that certain persons there were who knew not themselves, but who knew what belonged to them and was theirs? Neither can such as know not themselves, know the appertinences to what is theirs. For it seems, that 'tis the province of one and the same person, and is from one and the same science, to know himself, to know the things which are his, and to know the appertinences to those things.

'*Alc.* I believe it will be found so.

'*Soc.* And whoever is ignorant of what belongs to himself, and is his own, must likewise be ignorant of what belongs to other men, and is theirs?

'*Alc.* Undoubtedly.

'*Soc.* And if he is ignorant of what belongs to other men, will he not be ignorant also of what belongs to the public, and other civil states?

'*Alc.* He must be so.

'*Soc.* Such a man, therefore, cannot be a politician?

'*Alc.* Certainly he cannot.

'*Soc.* Neither will he be fit to manage a family?

'*Alc.* Certainly not.

'*Soc.* Nor will he have any certain knowledge of what he is doing?

'*Alc.* He will not.

* *Soc.* And will not the man who knows not what he is doing, do amiss?

* *Alc.* Certainly so.

* *Soc.* And doing amiss, will he not act ill both as a private person, and as a member of the public?

* *Alc.* No doubt of it.

* *Soc.* And the man who acts ill, is he not in a bad condition?

* *Alc.* A very bad one.

* *Soc.* And in what condition will they be who have an interest in his conduct?

* *Alc.* In a very bad one they, too.

* *Soc.* It is not possible, therefore, that any man should be happy if he is not wise and good?

* *Alc.* It is not possible.

* *Soc.* Those, then, who are bad men, are in a bad condition?

* *Alc.* A very bad one, indeed.

* *Soc.* Not even by riches, therefore, is a man delivered out of a miserable condition; nor by any other thing than wisdom and virtue?

* *Alc.* Apparently so.

* *Soc.* Fortifications, therefore, and shipping, and harbours, will be of no avail to the happiness of any civil states; neither will the multitude of their people, nor the extent of their territories, if they want virtue?

* *Alc.* Of none at all.

* *Soc.* If, then, you would manage the affairs of the city well, and rightly, you must impart virtue to your citizens?

* *Alc.* Beyond question.

* *Soc.* But can a man impart that to others which he has not himself?

* *Alc.* How should he?

* *Soc.* You yourself, therefore, in the first place, should acquire virtue; as should also every other man who has any thoughts of governing and managing, not himself only, and his own private affairs, but the people also, and the affairs of the public.

* *Alc.* True.

* *Soc.* Not arbitrary power, therefore, nor command, ought you to procure, neither for yourself nor for the city, but justice and prudence?

* *Alc.* It is evident.

* *Soc.* For if ye act justly, and prudently, your own conduct, and that of the city too, will be pleasing unto God?

* *Alc.* 'Tis highly probable.

* *Soc.* And ye will thus act by looking, as we said before, at that which is divine and splendid?

* *Alc.* Evidently so.

* *Soc.* And further, by directing your sight hither, ye will behold and know what is your own good*?

* Rather, 'see and know both yourselves, and your own good.'
 *Τὴν αἰετὰν τε αὐτῶν καὶ τὰ θυμέτρα ἀγαθὰ κατόψεσθαι τε καὶ γινώσκειν.
 Vol. II. P. 134. D. REV.

- ‘ *Alc.* True.
- ‘ *Soc.* Will ye, then, not act both rightly and well?
- ‘ *Alc.* Certainly.
- ‘ *Soc.* And acting thus, I will insure happiness both to yourself, and the city.
- ‘ *Alc.* You will be a safe insurer.
- ‘ *Soc.* By acting unjustly, as looking to that which is without God, and dark, ’tis highly probable that ye will perform actions similar to what ye behold, actions dark and atheistical, as being ignorant of yourselves.
- ‘ *Alc.* In all probability that would be the case.
- ‘ *Soc.* For, O my friend Alcibiades, if a man have the power of doing what he pleases, and at the same time want intellect, what will be the probable consequence of such arbitrary power, to himself if he is a private person, and to the state, also, if he governs it? As in the case of a bodily disease, if the sick person, without having medical knowledge, had the power of doing what he pleased, and if he tyrannised so that no person would dare to reprove him, what would be the consequence? Would it not be, in all probability, the destruction of the body?
- ‘ *Alc.* It would indeed.
- ‘ *Soc.* And in the affair of a sea voyage, if a man, void of the knowledge and skill belonging to a sea commander, had the power of acting and directing in the vessel as he thought proper, do you conceive what would be the consequence, both to himself and the companions of his voyage?
- ‘ *Alc.* I do; that they would all be lost.
- ‘ *Soc.* Is it otherwise, then, in the administration of the state, or in any offices of command or power? If virtue be wanting in the persons who are appointed to them, will not the consequence be an evil and destructive conduct?
- ‘ *Alc.* It must.
- ‘ *Soc.* Arbitrary power, then, my noble Alcibiades, is not the thing which you are to aim at procuring; neither for yourself, nor yet for the commonwealth; but virtue, if you mean either your own private happiness or that of the public.
- ‘ *Alc.* True.
- ‘ *Soc.* And before one acquires virtue, it is better to be under good government, than it is to govern; better not only for a child, but for a man.
- ‘ *Alc.* Evidently so.’ Vol. i. p. 92.

The great length to which we have already extended our examination of the present work, forbids us to make any farther extract from Mr. Sydenham's translation. Indeed, for the reasons before mentioned, it is unnecessary. In selecting the above specimen, we have been only influenced by the useful lesson it conveys: and more especially as, in point of elegance and faithfulness, it is equal to almost any passage that has ever flowed from the pen of that gentleman. The notes that accompany the nine dialogues, and which have Mr. Sydenham for their author, are honourable testimonies of his acuteness and

erudition. In general, to say the least of them, they are highly probable: but here and there we meet with a conjecture, and it would be wonderful were it otherwise, in which success does not seem to have attended him. But these we shall not now particularise; trusting that the conjectures of Mr. Sydenham, and other scholars, will shortly be brought to the test, and be confirmed, or refuted, by that valuable MS. of Plato, with which this country has been lately enriched.

We now close these volumes. They have engrossed so great a share of our attention, partly in consequence of their own importance, partly in consequence of the character of the translator. Our opinion of their merits it is almost needless to repeat. We have declared the style to be inadequate to the dignity of the original; and we have evinced that they abound in error and misconception. Of the proficiency of Mr. Taylor in Grecian literature, they leave no favourable impression: we are sorry to say, of his contempt of others, and opinion of himself, they have left a strong one. The only commendation we can, in conscience, bestow on the translator, is that of unwearied industry; industry in a cause which we cannot but disapprove—the cause of polytheism, and pagan absurdities. If he have any thing to object to the Christian religion, let him advance with his objections. The grounds of our belief have been often published to the world; let him put forth all his strength, and show that they are invalid. This task he may attempt, but he will attempt in vain. Nor shall we readily be induced to exclude the noontide sun, and to substitute in its room the glimmering taper.

ART. III.—*Wilkinson's Elements of Galvanism.* (Concluded from p. 264 of our preceding Volume.)

THE phænomena of Galvanism were no sooner observed, than philosophers immediately attempted to apply that principle to the cure of diseases. It was discovered to be a powerful agent, acting on the nerves, and, of course, was conceived to be very probably useful in nervous diseases. Had the authors confined themselves to cautious trials, they would not have been greatly in fault; but they early began to reason; and, before they knew that it was useful as a remedy, they began to adapt it to their own systems of pathology. This was early attempted by Galvani; who adopted the idea of his countryman Columnio, long since published in his treatise *De Ischiade Nervosa*, that nervous diseases arise from a deposition of fluids within the coats of the nerves. Great pains were also taken to connect the use of Galvanism and electricity with the state of the air, as it occurred in a positive or a negative state, previous to an inquiry whether either remedy

were useful in *either* state. Galvanism was also supposed to be a certain criterion of animation suspended only, not destroyed; without the previous trials whether it were exclusively the most powerful exciter of irritability, or any comparative examination of the effects of the Galvanic and electric fluids. In rheumatic affections, some of the earlier medical Galvanists found it of service; and it evidently increased the discharge from blistered parts.

One great advantage, which Galvanism has been supposed to offer, is a ready mean of distinguishing between a nerve and a muscle; and another is the means of ascertaining the degree of excitability of a muscle. The greater part, however, of the communications before us are extracted from M. Humboldt's paper, whose accuracy and patient observation we have never estimated highly. Whether his travels in the other hemisphere have improved him, remains to be examined.

M. Grappengeisser was the first author who wrote more professedly on the medical effects of Galvanism, with apparent candour and impartiality. He recommended it chiefly in paralysis, and seems to have shown, what we have already hinted, that the Galvanic fluid penetrates more profoundly into the nervous plexuses, and influences them in a more durable and more appropriate manner than the electric. In fact, though the electric fluid follows the course of the nerves, the Galvanic seems to assimilate with their power more completely, and to excite it more certainly. This author discriminates, very minutely, the different effects of the positive and negative sides of the pile; indeed more minutely than we can find it experienced in individuals; for the shock whether from this or electricity is to us so peculiarly painful, that we cannot personally examine it. The effects of these different sides are explained in the work before us. The diseases, however, in which it is employed by our author, are the different paralytic affections either general or local, with all those diseases which depend on languid circulation, white swelling, scrofulous humours, &c. Mr. Wilkinson next gives an abstract of M. Grappengeisser's mode of employing Galvanism, which we cannot abridge, and adds Mr. Teed's account of the effect of the Galvanic belt described in the *Philosophical Magazine*, which we strongly suspect to have been partly produced by a warm imagination. M. Sprenger of Jena's method of administering Galvanism in defects of hearing and smelling, diseases which he has hereby in many instances removed, are superadded. The effects of Galvanism on the animal oeconomy, observed in the medical school at Paris, we shall select.

* 1st, That, in the employment of the above pile, the Galvanic influence penetrates and affects the nervous and muscular organs, more profoundly than the common electrical apparatus, the latter being calculated by the customary measure of medical electricity.

2dly, That the effects of the pile produce powerful contractions, and strong sensations of pricking and burning, in parts which are, by their diseased state, rendered insensible to sparks, and even to electrical shocks.

3dly, That the duration of this action is such, as to warrant a hope that an efficacious excitement, capable of being successfully employed in the treatment of cases of paralysis, may be found in the Voltaic pile.

In the application of this apparatus it was likewise observed, that the effects produced appeared to be proportionate to the extent of the points of contact; insomuch that the most powerful excitation ensued; when the commotion was effected by the meeting of the conductors emanating from the Galvanic pile, with metallic conductors fixed on the diseased part, the contact being of a greater or less extent. Vol. i. p. 438.

In the above application of Galvanism to the human body, M. Halle remarked several very singular anomalies. The pile was frequently a long time in communicating its effect, which, in other trials, was completely interrupted for the space of several seconds. It would appear that, in both these cases, the Galvanic fluid met with some obstacle in its progress. Under these circumstances, it was sufficient, either to moisten the chain, to rub it, or to change the respective position of the rings, to establish the communication. It was in general observed, that, with a view to the speedy production of the sensation, it was not simply necessary that the skin should be moistened with water, but that the fluid should have been made to permeate its pores, until it was in a manner soaked. M. Halle himself, as well as several other persons who consented to submit to the experiment, felt the kind of sensation which Galvanism produces. It was, in their case, somewhat analogous to that which would have resulted from the punctures of several pins, if they had been forced at the same time into the skin. When the exciting arcs were applied to the vicinity of the salivary glands, a sharp pain was produced, accompanied by a sensation of heat, and a slight degree of metallic savour. Vol. i. p. 443.

The diseases, in this and some other communications, were of the paralytic kind; and these are followed by some disquisitions, from M. Vassalli-Eandi, on the action of Galvanism on the human body; an action much stronger, in his opinion, than that of electricity. He employs it also in palsy, and adds an instance of hydrophobia being cured by it. In sciatica, he thinks Galvanism, like electricity, may be useful, but that it is sometimes injurious: a variety of effect, which he explains from a doubtful and suspicious theory, but which answers the purpose of illustration. Indeed, many cautions are properly interspersed against the too rash and indiscriminate use of Galvanism. As it tends to decompose the fluids, it may be certainly injurious; and it has been found more so in the more compound fluids.

Even the urinary calculus it soon decomposes. We shall add the following remarks from our author's recapitulation : we reserved them for the purpose of connecting his own concluding observations.

‘ It has been also seen, that Pfaff has proposed the Galvanic stimulus in several diseases, more particularly in the paralysis of the optic nerve. As there is sometimes a complication of cataract with amaurosis, the characteristics of which are not always evident and certain, he recommends the employment of the Galvanic stimulus, as an expedient by which every doubt may be removed. If, in the case of cataract, in which its complication with amaurosis is not manifest, the application of two different exciters, in conformity to the well known process, does not produce any particular sensation in the eye, it is more than probable that amaurosis exists also. In the contrary event, it may be ascertained that this latter malady is not combined with the cataract.’ Vol. i. p. 465.

‘ He’ (M. Humboldt) ‘ shews that the Galvanic stimulus has a very considerable influence on the secretions, which it alters in a singular manner ; and that it may in this point of view, be employed as an opposite stimulus, to correct the vitiated secretions. In the course of his experiments he contrived to render manifest a kind of Galvanic atmosphere around the nerves, the presence of which was attested by a variety of phenomena. Lastly, by the administration of a description of Galvanic *injection*, which he effected by establishing a communication, with zinc and silver, between the mouth and the anus, he succeeded in bringing to life several small birds in a state of asphyxy.

‘ Without being too sanguine in our expectations, we may indulge a hope that Galvanism will hereafter supply the means of discovering the signs of life, still existing in man, when every appearance seems to indicate certain death. It may not be improper to notice, however, that the effects which have been perceived in the parts of certain animals, deprived of every sensation, and of all motion, have not been observed in those of man, in a similar state, when Galvanism has been tried. It is even more than probable, if we can judge by the precise knowledge we have acquired, relatively to the structure of the parts of the latter, that the Galvanic experiments which may be made on them hereafter will not afford results similar to those produced on the parts of animals. Time, alone, can clear up these doubts.’ Vol. i. p. 466.

The history of Galvanism, in a philosophical view, is resumed in the second volume : and, as the historian now treats of the labours of English philosophers, we may be more concise. He has followed them with great precision, commencing from the discovery of the formation of the Voltaic pile, and adding the theories of this singular combination. We have noticed many of these papers in our successive labours, and need only observe that Mr. Davy has shown that a succession of metals is not necessary.

A single metal alternating with different fluids is sufficient. The labours of the continental philosophers are then resumed : and we shall select the conclusions of M. Biot in an excellent memoir, read in the National Institute, on the motions of the Galvanic fluid.

‘ In this memoir an attempt is made to prove,

‘ 1st, That the laws of the movement of the Galvanic fluid result from the repulsive property of the particles of which it is composed ; and that, in this point of view, these laws are similar to those of electricity.

‘ 2dly, That the principal cause of the variations in the phenomena produced by the different apparatuses, consists in the diverse proportions in which the quantity, or mass of the fluid, is combined with its celerity.

‘ 3dly, That this fluid, which finds great difficulty in its passage through water, glides over the surface of that fluid with a great facility.

‘ 4thly, and lastly, That the chemical effects which Galvanism produces, cannot be considered as essentially distinct from electricity ; on this account, that the Galvanic fluid is never elicited in the apparatuses employed for that purpose, unless with a great celerity, and a small mass ; while electricity, when it is put in motion by the means of batteries, has at the same time a great mass, and a great celerity. Now if, in Galvanism itself, the different proportions of the celerity to the mass, give rise to such marked differences, how much greater must these differences be, between the electricity produced by machines, and the successive impulsions of a very weak electricity acting with a very great celerity ?’ Vol. ii. p. 170.

In some of the other parts of this history, we could have pointed out disagreements between the Galvanic and electric fluids ; but the subject at present is not sufficiently understood to clear every difficulty. On the whole, it seems probable that the Galvanic powers do not resemble accumulated electricity, but a weaker charge diffused over a larger surface. It is not even clear that the oxydation of the metals is necessary to its being excited, though oxygen is apparently essential to its activity. The decomposition of water may therefore be an accident in one view, though necessary in another ; as the condensation of the steam, in the steam-engine, produces the water which, in the gaseous form, is again to raise the piston. Subsequent to this period, M. Gautherot found that the metallic piles might be supplied by discs of charcoal and plumbago ; the former disengaging the hydrogen, and the latter the oxygenous gas ; and M. Pfaff seems to have shown that the irritability of muscles is augmented, when the zinc is applied to them, and the silver to the nerves ; but palsied, when these metals are in a contrary order. It is ascertained also with sufficient accuracy, that hot-blooded animals are not so susceptible of the Galvanic stimulus

as those of cold blood; and that the irritability on which Galvanism acts, is usually exhausted in the last struggles of expiring life. French ferocity, however, has furnished numerous subjects of experiments, where these struggles are at once stopped by the axe of the guillotine; and, in these, the irritability remained capable of being excited by Galvanism. We have formerly remarked that it is difficult to excite the heart to action, through the medium of its nerves. M. Bichet has endeavoured to show that the motion of this organ is wholly uninfluenced by the nervous power of the brain. It is certain that the regularity of its motions, so necessary to existence and health, is guarded with unusual care. Its nerves, from various sources, are mixed in ganglions, where they seemed to derive fresh energy from the cortical substance of these bodies; and small nervous fibrils are close to its surface, from branches of nerves probably unsuspected. While therefore the armature is applied to one part, the organ is more readily supplied from other sources; and its effects, if not checked by the intimate mixture of nervous fibrils in the ganglions, are prevented by the more regular supply from other nerves.

Mr. Wilkinson next endeavours to connect the scattered limbs into one uniform system. As he supposes Galvanism to be electricity, or, in other words, the Galvanic and electric fluids to be the same, he first premises some account of the latter science. All the phenomena of electricity are, in his opinion, reducible to the action and re-action between the air and the electric fluid. To this principle the phenomena of attraction and repulsion are owing; and it is a necessary foundation that all bodies should contain a portion of the electric fluid: the most perfect conductors contain, according to Mr. Wilkinson, the largest share; the best non-conductors, the least.

In the chapters on electricity we find some peculiar opinions, particularly respecting the electricity of the atmosphere, and several meteorological phenomena, on which we should offer our sentiments if the subject would not lead us too far. On several points Mr. Wilkinson's conclusions seem too hasty. From the termination of the twenty-third chapter, we shall select our author's view of the extensive influence of Galvanism.

'As all chemical decompositions depend upon the exility of the agent employed, and as, in general chemical processes, this agent is caloric; by the employment of a principle still more active and subtle, our analyses are likely to be more correct. Galvanism indeed holds out very flattering prospects. By its influence, decompositions are effected which were in vain attempted by caloric. Henry, of Manchester, has, by its means, divided the constituent parts of ammonia, and exhibited the hydrogen and azote in their separate states. Cruickshanks has produced the arbor Diæ; and Brugnatelli his

metallic electrats. Guyton, in his observations on the sulphuret of antimony, supposes Galvanism to have a considerable influence in the mineral kingdom. He thinks that the slow and progressive results of affinities may be put into action by the Galvanic fluid. The celebrated crystallographist Haüy discovered the influence of subterranean electricity; and the experiments of Lichtenberg have demonstrated its energies, by the beautiful configurations produced on his electrophorus. It is probable that hereafter Galvanism may be considered as a grand mineralizing agent.

‘It would seem that most of the silent operations of Nature are occasioned by the disengagement of this subtle principle. In inanimate bodies, it enables us to ascertain whether they are compound or simple substances. By its means we can determine whether two metals are dissimilar or not; whether metallic sulfures contain the metal in its reguline or oxydated state; or whether in any given substance carbon is a constituent part.

‘From a variety of circumstances it appears that this principle is, above all others, a stimulus to the functions of the animal economy. The construction of the animal organization tends to prove that its arrangement is calculated for the employment of such a principle. To an important purpose of this nature seems to be devoted the function of respiration. As fluids are imperfect conductors, carbon is diffused through the venous system, and only undergoes its changes in the lungs, where the principle of electricity is imparted to the blood, by which it is enabled to stimulate the left ventricle of the heart.

‘As the animal body has its non-conducting cuticle, so the vegetable kingdom possesses its equally resisting epidermis, with which the leaves and stalks of plants are guarded. The vegetable seeds are surrounded by a non-conducting velvet envelope, while the internal cellular and parenchymatous substance admits its ready diffusion.

‘It has already been shewn, that no changes can take place in conducting bodies, without a similar variation in their capacities for electricity. Thus, in the animal frame, any part being under a state of morbid derangement, its capacity for electricity will vary also; and thus, by a judicious application of this stimulus of nature, considerable good effects may be expected. The most indubitable instances have already been given of the blind and deaf recovering their sensory powers; of the paralytic patient being restored to his proper sensibility, and of rheumatic affections being almost instantaneously removed. Its direct influence on the principle of life has been fully proved, by its restoring deranged persons to the enjoyment of sense and reason, and counteracting the dreadful effects of hydrophobic irritation. Galvanism appears to be an energising principle, which forms the line of distinction between matter and spirit, constituting, in the great chain of the creation, the intervening link between corporeal substance and the essence of vitality. By this cursory view we may perceive the very extensive range of the influence of this principle; and if, at so early a period, so much has been ascertained, what may not be expected from the united efforts of those who are interested in the progress of the sciences?’ Vol. ii. p. 295.

Mr. Wilkinson then proceeds to offer a synthetic view of

the operations of Galvanism, considering it as a portion of electricity, which forms a component part of the conducting body, in the act of undergoing a change in its capacity from a greater to a less state; while electricity is the result of a temporary change in non-conducting bodies, insomuch that their capacities become, by attrition, momentarily increased. 'Galvanism,' he adds, 'is never produced by any change in non-conductors, while electricity is accumulated by them alone.' Conductors of electricity are also conductors of Galvanism, and in the same order. In the following series—*viz.* gold, silver, copper, iron, tin, lead, and zinc, each will become positive by the one preceding, and negative by that which succeeds: the metal oxydated will give out a portion of its combined electricity. The most and the least oxydable metals form the most active combinations. After the metals, in the class of conductors we find charcoal, muscular flesh, spirits, and beer.

Our author proceeds to illustrate his principle of electricity which he supposes to be separated by the oxydated surface of the metal, while it is supplied by the non-oxydated surface of the same or a dissimilar metal, in the different Galvanic phenomena; remarking, at the same time, the exquisite sensibility of the muscles of a frog. In the following chapter are added some singular effects arising from the Galvanic action of two dissimilar metals, or two dissimilar fluids with one metal, in the simplest actions of common life. The porter-drinker, who always prefers a pewter pot, may now be told that the supposed improvement of the liquor is not merely imaginary.

The next chapter relates to charcoal; and, though Mr. Wilkinson does not support the highly conducting power attributed to it by Mr. Davy, much allowance must be made for the kind of charcoal, and the perfection in which it is charred. In general, Galvanism is a powerful mean of detecting the presence of carbone, even in very small proportions, when *mechanically* combined.

What relates to animal substances, as conductors, is imperfect, as the results vary, and the law of variation is not yet ascertained. We have formerly said that Galvanic effects arise from alternations of muscle and nerve; and it is certain that the Galvanic fluid acts on the nerves only. It is idle to attempt to disprove this position by alleging that some animals, as the leech, have no nerves. It has a museular organisation, and must of course have exciting powers similar to nerves, if the fibrils have not been traced; mushrooms, which in their chemical nature approach to animal substances, are also conductors, though in an inferior degree. We have formerly had occasion to observe that the weight of evidence is against nerves regaining their power, by re-union, after having been divided. The remarks on the Galvanometer we cannot abridge. Our author

endeavours to reconcile its action with that of the Leyden phial. The construction of the Voltaic pile, or of the more modern improvement, the troughs, must also, for obvious reasons, be perused in the work itself.

A question of some importance, and the result of which was unexpected, occurred to the French philosophers—*viz.* whether, by enlarging the surfaces, the powers were not proportionally increased, while the number of plates continued the same? On examination, it appeared that the increased surfaces, with a given number of plates, did not increase the intensity of the sensation, though it increased the power which may be styled more purely electrical. The weakness of the sensation our author explains, from the resistance of the human body to the Galvanic influence. It is not that a greater power is not collected by the increased surfaces, but that no greater power can be imparted. When the sensation is proportionally less, a larger charge remains.

The decomposition of water by Galvanic processes has been considered as one of its most certain consequences; yet it is liable to numerous exceptions. When wires of gold and platina are employed, metals not oxydable, air is seen issuing from each; the zinc giving out oxygen, and the copper hydrogen. But, in these instances, if water be decomposed, what becomes of the other ingredient of the decomposed water at either extremity? No other aerial fluid can be perceived; and Richter has attempted to prove that no other is formed, since, from each extremity, he has collected its own peculiar gas. Mr. Wilkinson has endeavoured to show, that, at either wire, both gases are developed: it is at least proved that Richter's conclusion is incorrect; but we think the subject still surrounded with difficulties. No explanation which ingenuity has hitherto suggested, is supported by observation or experience. Philosophers have scarcely dared to face this difficulty, as it so completely overthrows the modern chemical doctrines.

Our author's next subject of inquiry is the comparative influence of electricity and Galvanism on metallic substances. The former acts with violence, and with interrupted energy; the latter slowly, steadily, and progressively. Galvanism will burn silver and gold leaf, which resist the most powerful fire of our furnaces. Other metallic leaves, though thicker, burn and are oxydated; but, in an exhausted receiver, they give out light, though they are not oxydated. Brugnatelli's supposed electrats, salts formed by means of what he styles the electric acid, are probably the effects of a combination of nitrous acid and ammonia, produced, in Mr. Wilkinson's opinion, in every Galvanic decomposition of water. This part of the subject is not sufficiently elucidated at present; and he seems to promise a future examination.

The Galvanic animals, the *gymnotus electricus* and the torpedo, are next considered; but little novelty is added. Our author seems to think that the electrical state of their peculiar organs is changed by a variation of their distance; but there is seemingly no power capable of producing such a change.

The thirty-fifth chapter is very interesting. Its great object is to show that the modern systems respecting respiration as the cause of animal heat, and particularly the doctrines of Dr. Crawford, Dr. Priestley, &c. on the capacity of heat in the arterial and venous blood, are not fairly supported by experiment; but that the cells of the lungs are in reality Galvanic organs; that the electricity of the air is discharged in these cells, where the fluid, loaded with carbon, increases its activity, thus giving a stimulus to the heart. Another part of the system, that there is in reality no red blood returned by the veins, but only the colourless part of the arterial blood, is certainly fanciful; nor indeed can we fully coincide with the author in the opinions respecting the use of respiration.

The last chapter relates to the medicinal application of Galvanism. The diseases in which it has been recommended, are palsy, deafness, and gutta serena. In the last disease, our author has never succeeded; and, in the former, his distinctions and cautions in the employment of this remedy are very judicious. In spasmodic affections, and in cases where there is a defect of motion and a want of action, it is eminently useful. In the low states of mania and hypochondriasis, Galvanism has been found serviceable, and it will probably be equally so in cases of suspended animation.

Various necessary plates, neatly executed, decorate these interesting and useful volumes. In general they deserve very great commendation. The facts are faithfully and clearly detailed; the observations pointed and judicious; and the original suggestions are ingenious and philosophical.

ART. IV.—*The Correspondence of Samuel Richardson, Author of Pamela, Clarissa, and Sir Charles Grandison. Selected from the original Manuscripts, bequeathed by him to his Family. To which are prefixed, a biographical Account of that Author, and Observations on his Writings, by Anna Latitia Barbauld. 6 Vols. 12mo. 2l. 5s. Boards. Phillips. 1804.*

THIS is one of the *sera rosa* whose late bloom we some time since witnessed and lamented. Those who delay biographic accounts, defer the tale till the persons who are interested in them are no longer able to hear, and those who can still attend are almost ready to ask, of what *æra* the biographer speaks? There is indeed an intermediate class, who, in their youth, were

witnesses to the warm acclamations of readers of every rank, and, in their more advanced age, are not unwilling to appreciate the real weight of the *popularis aura*. Of this class we confess ourselves to be a part; and, as on a late occasion, we are not disinclined to haunt, like ghosts, the spots in which we once delighted, to revive the recollection of what formerly gave us so much pleasure.

It is properly observed in a modest advertisement, that, when we penetrate the recesses of the cabinet, we should ask ourselves by what right we thus intrude. It is added, that Mr. Richardson kept copies of his letters: that he once designed their publication in his life-time, but properly deferred it till no feelings could be hurt by the communication, no delicacy pained by the slightest allusion to personal circumstances. To this collection of his own many have voluntarily contributed.

‘When Mr. Phillips,’ adds Mrs. Barbauld, ‘had completed his purchase, he engaged me to perform the necessary office of selection. I have endeavoured to do justice to him and to the public; how I have succeeded I am yet ignorant. No two persons probably would fix precisely upon the same standard of choice. But it may be fairly observed, that neither can any one criticise that standard with judgement, unless he had submitted to his inspection, not only the letters that are taken, but those also which are left.’ Vol. i. p. vi.

We have perused the life of Mr. Richardson with peculiar satisfaction, and can declare that we have scarcely ever seen a biographic sketch more elegant, better discriminated, and more appropriate. The introduction we shall select.

‘There is no period in the history of any country, at all advanced in elegant literature, in which fictitious adventures have not made a large part of the reading men have most delighted in. They have been grafted upon the actions of their heroes, they have been interwoven with their mythology, they have been moulded upon the manners of the age, and, in return, have influenced not a little the manners of the next generation, by the principles they have insinuated, and the sensibilities they have exercised. A spirit of adventure, a high sense of honour, of martial glory, refined and romantic passion, sentimental delicacy, or all the melting sensibilities of humanity, have been, in their turns, inspired by this powerful engine, which takes so strong a hold on the fancy and the passions of young readers. Adorned with the embellishments of poetry, they produce the epic; more concentrated in the story, and exchanging narrative for action, they become dramatic; allied with some great moral end, didactic, as in the *Telemaque* of Fenelon, and the *Belisaire* of Marmontel. They are often the vehicles of satire, as in the *Candide* and *Babouc* of Voltaire, and the *Gulliver’s Travels* of Swift. They take a tincture from the learning and politics of the times, and are often made use of successfully to attack or to recommend the prevailing systems of the day. We have seen liberty and equality recommended from one publication, and French principles exposed in another. When

the range of this kind of writing is so extensive, and its effect so great, it is evident that it ought to hold no mean rank amongst the productions of genius; and, in truth, there is hardly any department of literature in which we shall meet with more fine writing than in the best productions of this kind. It is not easy therefore to say, why the poet should have so high a place allotted him in the temple of Fame, and the romance-writer so low a one, as, in the general estimation, he is confined to; for his dignity as a writer has by no means been measured by the pleasure he affords to his readers; yet the invention of a story, the choice of proper incidents, the *ordonnance* of the plan, the exhibition of the character, the gradual development of a plot, occasional beauties of description, and, above all, the power exercised over the reader's heart, by filling it with the successive emotions of love, pity, joy, anguish, transport, or indignation, together with the grave impressive moral resulting from the whole, imply talents of the highest order, and ought to command our warmest praise. There is no walk in which taste and genius have more distinguished themselves, or in which virtuous and noble sentiments have come out with greater lustre, than in the splendid fictions, or pathetic tales, with which France, Germany, Switzerland, and our own country, have adorned the annals of their literature.' Vol. i. p. vii.

Richardson, as Mrs. Barbauld justly observes, was the father of the modern novel; but he was strictly, perhaps, the second parent only. The early romances, of which Mrs. Barbauld takes *Amadis de Gaul* as a model and an example, were calculated to elevate and surprise. These became softened into love-stories of a tedious length, and, at last, sunk into more easy and natural narrative. Our author sketches the history of romances and novels with a light, easy, outline: and we wish, with herself, that the picture may be filled up by some able hand. We shall attempt that part of it which relates to the period of Richardson.

It is properly remarked by Mrs. Barbauld, that *Zaida* and the *Princess of Cleves* are among the first resemblances to the modern novel. The author of these was madame de la Fayette: while in France, Segrais and Scarron; in Spain, Cervantes and the author of *Don Gusman d'Alfarache*, the prototype of *Gil Blas*; condescended to relate the adventures of persons beneath the dignity of kings and princes, in a style at once familiar and natural. Many of these did not meet the eye of the English reader till a period very near the first publications of Richardson; and they are so remote from his manner, that they could have had no influence on his plans or their conduct. The *Atalantis* of Mrs. Manley, the second edition of which was published in 1713 (and it is not necessary to trace the first), is still more remote from Richardson's views, and can scarcely be termed a novel, though a few of the stories are drawn out to some length, with a little variety of adventure: they are known to be scandalous tales, published or invented for political purposes. The

æra of Mrs. Behn was that of Mrs. Manley, each of whom was equally unprincipled and licentious. Mrs. Behn chiefly trusted to the works of the French novelists, though she did not follow them with servile steps; and we must recollect that to her we owe the story of *Oroonoko*, told with great simplicity and pathos, in which she could have no prototype.

About this æra, various select novels were published by a Mr. Bentley of Covent-garden, with which were joined some select miscellaneous tracts of different and unequal value. The novels were afterwards collected in two volumes, to which two others were added at a subsequent period. They now, we believe, pass under the title of Mrs. Aubin's Collection, though no name appears in the title, or at the end of the preface. Of these, several are apparently original, and one relates to our own queen Elizabeth, and the unfortunate Essex: but they are in the formal style of an earlier æra, and seldom descend to the familiar conversations of domestic life. Mrs. Heywood, the author of the *Invisible Spy*, the *Female Spectator*, *Betsy Thoughtless*, *Jemmy* and *Jenny Jessamy*, &c. published some of these works, at least, before the appearance of *Pamela*: but they were, in every respect, unlike the works of Richardson.

We should say then that Richardson was the undoubted inventor of the style which has gained him so much applause, but that one novelist remains, from whose torch the flame was apparently caught—we mean De Foe. That author ceased to be a politician (in which character he had suffered so much and gained so little) about the year 1718, and, in the following year, published his *Robinson Crusoe*, on whose peculiar merits and beauties it would be insulting to the reader to enlarge. Suffice it to say, that its attractions greatly depend on the familiar, characteristic, conversations, on the minute and appropriate descriptions, which give reality to fiction, and strongly interest by placing the scene before us. Richardson could not be ignorant of De Foe's work, and his merits, since he continued that author's *Tour through Great Britain*, first published in 1724; and we need not add, that much of Richardson's powers of attraction depends on his familiar painting of minute and incidental circumstances. Richardson, it may be said, has taken a more extensive scope, and moved in higher life; but the manners are the same, the descriptions equally familiar and appropriate. De Foe, we fear, always deals with the worst characters of either sex: yet he could, with equal fidelity, describe worth, benevolence, candour, and religion. Would our limits permit, instances of all might be selected from the '*Life, Adventures, and Piracies of Captain Singleton*,' '*Memoirs of a Chevalier*,' '*Moll Flanders*,' '*Journal of the Plague*,' '*Colonel Jacques*,' '*the Fortunate Mistress*,' and '*a Voyage round the World*,'—the whole published between the years 1719 and

1725. De Foe was indefatigable in his researches, and discriminating in his authorities, so that there are few errors in geography or history, which are hence distinct and clear in his descriptions. We may mention, as instances, that the *Memoirs* of a Chevalier have been considered as true history by many besides Mr. Harle; his *Journal of the Plague* is often gravely quoted as a medical work; and in his *Voyage round the World*, the manners of the Society Islanders are described, though the situation of the Islands is carefully confused, and apparently with design. In all his works, the peculiar characteristics of this author are conspicuous; and though he has stooped to licentious description, it has escaped us if at any time he has failed in the moral.

It is no disgrace to Richardson's memory to suppose De Foe his prototype; for he has not copied his indelicacies, of which the instances, however, are not very numerous; and we must add of Richardson, that *he* has made a nearer approach to indelicacy than many other authors who have been styled licentious, without being professedly guilty of it.

The life of Richardson contains few incidents. He was an industrious printer, incorruptibly just, exemplarily candid and generous. He lived on familiar terms with some of the best men of his age; and, though unfortunate in the loss of many promising children and an excellent wife, as well as in ill health, yet was in some degree recompensed by a circle of faithful, as well as unremittingly kind and attentive friends, added to those relatives whom death had spared.

Grave and sedate in his youth, he was the confidant of many young females, for whom he conducted an epistolary correspondence with their lovers: at a subsequent period he wrote a series of familiar letters on some of the most important events of human life. He hence obtained a facility of epistolary composition; and an engagement with the booksellers for a work similar to the last-mentioned, was the foundation of *Pamela*, the basis of his *Clarissa* and *Sir Charles Grandison*, the corner-stone of his extensive reputation.

After giving a short abstract of the story of *Pamela*, Mrs. Barbauld proceeds as follows.

'Such is the outline of this first work of our author, which was published in 1740. It was received with a burst of applause from all ranks of people. The novelty of the plan, the strokes of nature and pathos with which the work abounds, the simplicity of the language, the sentiments of piety and virtue that are brought forward, took at once the taste of the public. Numberless were the compliments Mr. Richardson received upon it, as soon as he was known to be the author, for in the publication he only assumed the character of editor, and that not by name. He had earnestly wished, he said, to be concealed; probably he did, till its reception was known. All

that read were his readers. Even at Ranelagh, those who remember the publication say, that it was usual for ladies to hold up the volumes of *Pamela* to one another, to show they had got the book that every one was talking of. The tendency of this novel was held to be so excellent, that it was recommended by Dr. Slocock, even from the pulpit. The friends of the author were lavish, not to say extravagant, in their compliments, and he received spontaneous eulogiums from many of the first authors of the age.' Vol. i. p. lvii.

This description, though warmly worked up, is no exaggeration. Fans were adorned with representations of the most striking scenes; the volumes were the ornaments of the parlour and dressing-room; and more than one couple were eagerly followed, at Bath, and other places of fashionable resort, as the prototypes of the hero and heroine. Again to examine the merits and defects of the work with our very ingenious biographer would be now improper; yet, in the following observations on its defects, there is so much strict propriety and true delicacy, such accuracy of distinction and solidity of judgement, that we cannot refrain from copying the passage.

'The character of Mr. B. himself is drawn with less address than that of any one in the piece; he is proud, stern, selfish, forbidding, (selfish, that is to say, in his love, for he has generosity enough in money matters) and his ideas of the authority of a husband are so high, that it is not easy to conceive of *Pamela's* being rewarded by marrying him, unless her regard for external circumstances was greater than the author would wish to have supposed. The moral of this piece is more dubious than, in his life-time, the author's friends were willing to allow. So long as *Pamela* is solely occupied in schemes to escape from her persecutor, her virtuous resistance obtains our unqualified approbation; but from the moment she begins to entertain hopes of marrying him, we admire her guarded prudence, rather than her purity of mind. She has an end in view, an interested end, and we can only consider her as the conscious possessor of a treasure, which she is wisely resolved not to part with but for its just price. Her staying in his house a moment after she found herself at liberty to leave it, was totally unjustifiable; her repentant lover ought to have followed her to her father's cottage, and to have married her from thence. The familiar footing upon which she condescends to live with the odious Jewkes, shows also, that her fear of offending the man she hoped to make her husband, had got the better of her delicacy and just resentment, and the same fear leads her to give up her correspondence with honest Mr. Williams who had generously sacrificed his interest with his patron in order to effect her deliverance. In real life we should, at this period, consider *Pamela* as an interested girl; but the author says, she married Mr. B. because he had won her affection, and we are bound, it may be said, to believe an author's own account of his characters. But again, is it quite natural that a girl, who had such a genuine love for virtue, should feel her heart attracted to a man who was endeavouring to destroy that virtue? Can a woman value her honour infinitely above her life, and

hold in serious detestation every word and look contrary to the nicest purity, and yet be won by those very attempts against her honour to which she expresses so much repugnance? Does not pious love to assimilate with pious, and pure with pure? There is, indeed, a gentle seduction of the affections, from which a virtuous woman might find herself in danger, especially when there existed such a bar to a legitimate union as great disparity of rank and fortune; but this kind of seduction was not what Mr. B. employed. He did not possess, with Sedley,

“ ——— that prevailing gentle art,
Which can, with a resistless force, impart
The loosest wishes to the chastest heart;
Raise such a conflict, kindle such a fire,
Between declining virtue and desire,
That the poor vanquish'd maid dissolves away,
In dreams all night, in sighs and tears all day.”

His attempts were of the grossest nature, and, previous to, and during those attempts, he endeavoured to intimidate her by sternness. He puts on the master too much to win upon her as the lover. Can affection be kindled by outrage and insult? Surely, if her passions were capable of being awakened in his favour, during such a persecution, the circumstance would be capable of an interpretation very little consistent with that delicacy the author meant to give her.
Vol. i. p. lxiii.

There was, it seems from one of our author's letters to Aaron Hill, an original story similar to that of Pamela; yet no part of Richardson's fame is derived from invention: *materiem superabat opus*. But perhaps it may be worth while to inquire more minutely into the source of the applause thus lavishly bestowed; applause somewhat disproportioned to the merits of the work, though we acknowledge these to be considerable.

The interest that we feel in the varied fortune of the dramatic hero, undoubtedly arises from the cunning of the scene, from the art of the poet, who represents the whole as real. Southern, Otway, and Lillo, in their domestic tragedies, approaching nearer to 'our own business and bosoms,' have interested us more intimately. Comedy, which gives the more pleasing events of domestic life, amuses rather than interests; but, by the same magic, hurries us from ourselves to the scene of action. The novelist wants the assistance of the scenery and the actors; but an author of skill supplies the deficiency by minute description, and the familiar incidents which contribute to realise the scene. The novels that preceded those of Richardson, had little of the familiarity of common life. The speeches were formal, and of no inconsiderable length; the manners lofty, and distant; the scenes and circumstances indistinct; while probability was, in almost every instance, violated. Then came De Foe, with all the magic of minute and appropriate description: and next followed Richardson, less exceptionable in the pictures

he draws, and equally fascinating in the interests he excites. Many of Richardson's correspondents express their surprise that he, whose conduct in every station of life was exemplary, should have excelled in describing the manners of libertines. He has never explained the source of his accuracy; but, as he had Otway's Lothario, the prototype of Lovelace, so he had, in De Foe's novels, many libertine characters. We sometimes suspect that he has condescended to 'pick up gold from several of the grosser scenes of his predecessors.'

It has happened, by a singular fatality, that Richardson, who began with writing familiar letters for the improvement of young women, should have started into a new and untried path; for, in the epistolary form at least, it was untried; and that Fielding, whose original object seems to have been to ridicule Pamela, should, with little more previous design, have formed the comic epic. We think we can perceive that the rich vein of humour discovered in the Rev. Mr. Abraham Adams, was the result of circumstances, rather than of a pre-conceived plan. The story of Pamela begins the work; and, to preserve consistency, must, of course, end it: but we lose the family of Andrews from the time Joseph leaves lady Booby; and we recover them again, somewhat ungraciously, to give a most improbable termination to the tale. One stroke of dry humour deserves mentioning, where Pamela reproves Fanny for aiming at *her* brother. The amiable and exemplary character of old Andrews is also sadly degraded. Richardson, it is said, felt the injury severely, and the conduct of Fielding was certainly unjustifiable, as they were on terms of apparent friendship; but, if the idea thus started have any foundation, posterity has been amply repaid by the other works of Fielding, of Smollett, and their numerous followers. The two subsequent volumes of Pamela are a tax on the reader and purchaser; they chiefly consist of a reply to the criticisms on Pamela; though a few of the scenes, particularly the incidents at the masquerade, with some of the adventures of Mr. H., are interesting, and in Richardson's best manner.

So fleeting, however, is popular applause, that of the rising generation few have heard of Pamela; and such high seasoning is required by modern taste, that those who should now read it, would probably find its simplicity, formerly so attractive, insipid. It was soon followed by the first volumes of *Clarissa*; a work of which every country can boast a translation, and which the critics of each have praised with enthusiasm. It is indeed a novel of singular merit, and yet, we think, of great and glaring faults. Even in a moral view, the meretricious charms that decorate Lovelace, have, by their glare, shed a lustre on the darker shades of his character; and many, we believe, have copied his vices, and shut their eyes to the consequences. Mrs. Barbauld analyses the story, and adds the following just remarks on its conduct.

‘ On this slight foundation, and on a story not very agreeable or promising in its rude outline, has our author founded a most pathetic tale, and raised a noble temple to female virtue. The first volumes are somewhat tedious, from the prolixity incident to letter-writing, and require a persevering reader to get through them: but the circumstantial manner of writing which Richardson practised, has the advantage of making the reader thoroughly acquainted with those in whose fate he is to be interested. In consequence of this, our feelings are not transient, elicited here and there by a pathetic stroke; but we regard his characters as real personages, whom we know and converse with, and whose fate remains to be decided in the course of events. The characters, much more numerous than in *Pamela*, are all distinctly drawn and well preserved, and there is a proper contrast and variety in the casting of the parts. The plot, as we have seen, is simple, and no under-plots interfere with the main design. No digressions, no episodes. It is wonderful that without these helps of common writers, he could support a work of such length. With *Clarissa* it begins,—with *Clarissa* it ends. We do not come upon unexpected adventures and wonderful recognitions, by quick turns and surprises: we see her fate from afar, as it were through a long avenue, the gradual approach to which, without ever losing sight of the object, has more of simplicity and grandeur than the most cunning labyrinth that can be contrived by art. In the approach to the modern country seat, we are made to catch transiently a side-view of it through an opening of the trees, or to burst upon it from a sudden turning in the road; but the old mansion stood full in the eye of the traveller, as he drew near it, contemplating its turrets, which grew larger and more distinct every step that he advanced; and leisurely filling his eye and his imagination with still increasing ideas of its magnificence. As the work advances, the character rises; the distress is deepened; our hearts are torn with pity and indignation; bursts of grief succeed one another, till at length the mind is composed and harmonised with emotions of milder sorrow; we are calmed into resignation, elevated with pious hope, and dismissed glowing with the conscious triumphs of virtue.’ Vol. i. p. lxxxii.

Mrs. Barbauld’s criticism on *Clarissa* is too long for an extract, and cannot be abridged. It demands, however, our warmest and most unreserved commendation. Yet there is one part of the moral, which we think she has overlooked:—it is this; from the conduct of the story, from the correspondence imprudently begun every misfortune which *Clarissa* experiences seems to have arisen. To lessen the blame which would hence attach to the heroine, her mother is introduced as consenting; but the mother is represented as weak and inconsiderate; and whatever becomes of this circumstance as a justification, the lesson should be infixed in every female mind, that the first weakness is often irrecoverable; it should teach young women to guard against every the slightest indiscretion, which would arm the hands of the libertine with a new weapon. The following observations are too interesting and just to be omitted.

‘ That *Clarissa* is a highly moral work, has been always allowed ; but what is the moral ? Is it that a young lady who places her affections upon a libertine, will be deceived and ruined ? Though the author, no doubt, intended this as one of the conclusions to be drawn, such a maxim has not dignity or force enough in it, to be the chief moral of this interesting tale. And, it has been already mentioned, that *Clarissa* can hardly stand as an example of such a choice, as she never fairly made the choice. On the contrary, she is always ready, both before her elopement and after it, to resign the moderate, the almost insensible predilection she feels for *Lovelace*, to the will of her parents ; if she might only be permitted to refuse the object of her aversion. Is she, then, exhibited as a rare pattern of chastity ? Surely this is an idea very degrading to the sex. *Lovelace*, indeed, who has a very bad opinion of women, and thinks that hardly any woman can resist him, talks of trying her virtue, and speaks as if he expected her to fail in the trial. But, surely, the virtue of *Clarissa* could never have been in the smallest danger. The virtue of *Pamela* was tried, because the pecuniary offers were a temptation which many, in her station in life, would have yielded to ; and, because their different situations in life opposed a bar to their legitimate union, which she might well believe would be insuperable. The virtue of *Walter’s Charlotte* was tried, and the virtue of the wife of *Zeluco* was tried, because the previous marriage of one of the parties made a virtuous union impossible.—But *Clarissa* ! a young lady of birth and fortune, marriage completely in her lover’s power—she could have felt nothing but indignation at the first idea which entered her mind, that he meant to degrade her into a mistress. Was it likely that she, who had shewn that her affections were so much under her command, while the object of his addresses appeared to be honourable marriage, should not guard against every freedom with the most cautious vigilance, as soon as she experienced a behaviour in him, which must at once destroy her esteem for him, and be offensive to her just pride, as well as to her modesty ? It is absurd, therefore, in *Lovelace* to speak of trying her chastity ; and the author is not free from blame in favouring the idea that such resistance had any thing in it uncommon, or peculiarly meritorious. But the real moral of *Clarissa* is, that virtue is triumphant in every situation ; that in circumstances the most painful and degrading, in a prison, in a brothel, in grief, in distraction, in despair, it is still lovely, still commanding, still the object of our veneration, of our fondest affections ; that if it is seated on the ground it can still say with *Constance*,

“ Here is my throne ; kings, come and bow to it ! ” Vol. i. p. xcix.

As *Clarissa* was published in parts, two volumes only appearing at first, the whole nation was wild with expectation of the event ; and in the letters preserved in these volumes, the utmost anxiety respecting the termination seems to prevail. An unfortunate conclusion was eagerly deprecated ; but such was the opening, that, consistently with the moral, the conclusion could scarcely be happy, unless it gave a sanction to the dan-

gerous delusion that a reformed rake makes the best husband. On the other hand, Clarissa's error, if any, was so slight and so distant, her general conduct so exemplary, that to punish her was scarcely consistent with retributive justice. In fact, Richardson held the wolf by the ears; he could neither leave her happy, nor suffer her to fall, without the imputation of error or cruelty.

Many smaller circumstances were objected to him, which we cannot enlarge on; and some of these occasioned another work, Sir Charles Grandison. It is not uncommon for authors to exhaust their own peculiar vein; or for readers, on the other hand, to grow weary of long tiresome conversations of a detail of characters to be introduced, when they rather wish them to introduce themselves. Nothing can be more tedious and inartificial than Richardson's early volumes, those of Pamela excepted; and great must have been his powers to interest, and to fascinate, when so forbidding a threshold was to be passed. Sir Charles Grandison was to make the *amende honorable* for former errors, or at least for imputed errors. By this work the author was to apologise for the faults of Lovelace; he was to counteract the bias left on the mind in favour of duelling; and he was to display the good man, and the strictly virtuous, sensible, and prudent woman. This subject, however, would carry us too far; and we must, for a time, stop. We have already offered our apology for the extent of our article. We wander like ghosts; but, like them, if spoken to, we vanish.

(To be continued.)

ART. V.—*The Anatomy and Surgical Treatment of inguinal and congenital Hernia.* By Astley Cooper, F. R. S. &c. Illustrated by Plates. Folio. 2l. 2s. Boards. Robinsons. 1804.

THIS very splendid and accurate work merits our warmest commendations. The beauty of the type, the variety, the elegance, and the importance of the plates, render it an object of considerable importance both to the physician and surgeon: to the surgeon, whose immediate exertions are required; and to the physician, who may otherwise, from mistaking the effects of rupture for ileus or enteritis, not only increase inflammation by stimulating medicines, but lose the only period when the surgeon's interference would be successful. We cannot too strongly recommend to the physician an attention to this complaint, since we have seen the worst consequences result from neglecting its proper study. In every case of supposed ileus, the abdomen should be carefully examined, not only in the usual places of hernia, but in every part. A very small portion of intestine, not in size exceeding a filbert, passing through the fibres

of the abdominal muscles, will often produce the most violent and fatal effects.

This part of our author's work is confined to inguinal and congenital hernia, which he has examined in all their varieties : and the modes of operating are described with peculiar simplicity and perspicuity. He wished to have employed Dr. Barclay's anatomical nomenclature, but very properly considered that such a total change of language would have lessened the utility of a work designed for general use ; and he has therefore contented himself with limiting common terms somewhat more strictly than they are employed by former authors. The plates are very elegantly engraved by Heath, from drawings by Kirtland ; and, to insure their accuracy, the outlines have been laid down from actual measurement.

The chapters of this part of the work are seventeen in number, and contain—'1. General Description of Hernia—2. The Anatomy of the Parts concerned with inguinal Hernia—3. Inguinal Hernia—4. The Causes of Hernia—5. Reducible Hernia, and the use of Trusses—6. The irreducible Hernia—7. The strangulated Hernia—8. Treatment of strangulated Hernia—9. Circumstances to be considered previous to the Operation—10. The Operation for inguinal Hernia—11. Mortification of the Intestine—12. Treatment after the Return of the protruded Parts—13. Very large Hernia—14. Small inguinal Hernia—15. Hernia on the inner side of the epigastric Artery—16. Hernia in the female—17. Congenital Hernia.'

The description of hernia of different kinds is peculiarly clear and distinct : but we need only notice some of the more important additional observations of the author. The sac, in old hernia, has been described as thickened so as to lose its peritoneal structure, and to be divisible into layers ; but Mr. Cooper informs us that this opinion arises from a want of distinction. The thickening takes place in the *covering* of the sac, the peritoneum sustaining but little change. The covering of the hernial sac often consists of more than one tendinous fascia ; which should be kept in mind, to prevent embarrassment during the operation. The protruded parts are not always contained in a sac, since, when there are unnatural apertures between the fibres of the muscles, the intestines, it is said, are not constantly covered by the peritoneum ; yet, in such instances, this membrane must be ruptured ; for we can hardly conceive the intestine to escape from between the duplicature of the mesentery.

The anatomy of the parts can scarcely be the subject of any animadversion. We may, however, just mention a circumstance well known to able anatomists, but probably not to the generality of surgeons. The ring, as it is called, or rather the aperture in the tendon, is formed by a splitting of the fibres of the external oblique muscle ; yet the passage hence into the abdomen is not immediate, since between this there is another

aperture formed by the tendons of the internal oblique and transverse muscles, about an inch and half immediately behind and at the outside of the ring, in a line passing from the ring to the spine of the ileum. In fact, the passage of the spermatic chord and round ligaments is so guarded, that rupture seems at first sight a very improbable event; and indeed the mechanism of the ring, which by the action of the external oblique muscle is closely drawn together, seems also intended to prevent the accident: at the same time, when it has occurred, a similar action may contribute to the strangulation; and, in such instances, the intestines are usually distended; which, occasioning a reaction of the muscles on the distended part, must greatly contribute to this effect.

Inguinal hernia is next considered, and clearly described. Mr. Cooper has not seen the sac behind the chord; but he has found it protruded between its vessels, the vas deferens on one side of the sac, the vessels on the other. In another instance, the vas deferens was behind the sac. The distinguishing symptoms of inguinal hernia are very accurately laid down: but, as they do not in substance differ from what other authors have observed, we shall not enlarge on them. The means however of distinguishing hernia from varicocele are less known, so that we shall shortly mention them.

‘Varicocele has indeed many marks of hernia. When large, it dilates upon coughing, but not otherwise: it appears, in the erect position, and retires, when the body is recumbent; and it is first observed near the ring. The only sure method of distinction with which I am acquainted, is this: place the patient in the horizontal posture, and empty the swelling by pressure upon the scrotum; then putting the fingers firmly upon the upper part of the abdominal ring, desire the patient to rise: if it is a hernia, the tumour cannot reappear, as long as the pressure is continued at the ring; but if a varicocele, the swelling returns with increased size, owing to the return of blood into the abdomen being prevented by the pressure. Some judgement may also be formed from the feel of the tumour, for that of a varicocele is always ropy, as if a bundle of cords were contained within the scrotum.’

The causes of hernia are sufficiently known. The disease, when arising from a violent action of the abdominal muscles, chiefly occurs in consequence of the upper portion of these muscles being particularly exerted. Riding in an uneasy carriage, or on a horse whose motions are rough and violent, produces the disease; which equally arises however from want of resistance at the ring, and is frequently, on that account, hereditary. It is also excited by a violent pressure of the bowels, or increased height of these parts, from fat. Thus leanness or obesity, suddenly produced, may be a cause of hernia.

In the use of trusses, there is one important observation to be attended to, and to prepare for which, we mentioned the two rings in the tendons of the external oblique, and of the in-

ternal and transverse muscles. This is, that the pad of the truss should not press only on the former ring, but on the space between the rings, so as to close the latter.

Irreducible hernias, with their causes, are next considered. One of these causes is the formation of membranous bands across the sac, which entangle the bowels: another is a large quantity of fat in the omentum, which has descended. In the latter case, a constant application of cold, or of steady pressure, has, at least, diminished the tumour, and lessened the danger of the disease.

Strangulated hernias form the most dangerous complaint, since inflammation and mortification soon appear. They arise from compression on the veins, preventing the return of blood, while the resistance of the coats of the arteries prevents the diminution or obliteration of their canals. The abdominal ring, as tendinous, will not admit of contraction; but the internal ring, as we may style it, partly formed of the edges of the muscles, is sometimes spasmodically contracted.

The treatment of strangulated hernia follows; and Mr. Cooper describes, with great judgement, the usual plans. He owns, however, that he has seldom been gratified by seeing a hernia reduced after bleeding and the warm bath. We freely confess, that we *think* we have seen such a practice accelerate mortification. It may be accidental; but by far the greater number of fatal cases of hernia, enteritis, and ileus, that we have witnessed, are those in which the warm bath had been employed. Cold, and the infusion of tobacco thrown up in the form of a clyster, are the chief remedies to be depended upon. A drachm of tobacco is infused in twelve ounces of boiling water for ten minutes; but, as constitutions, as well as the strength of the tobacco, vary, our author advises only half the quantity, at first, to be injected: fatal consequences have followed a too rash and indiscriminate use of this remedy. It usually produces languor and fainting, during which the hernia returns spontaneously, or in consequence of a very slight pressure. Mr. Cooper explains, with great propriety, the management of cold, of cathartics, and opium, the two last of which he thinks are sometimes effectual when conjoined: they have not proved so in our hands. When ice cannot be procured, artificial cold may be produced by nitre and sal ammoniac: the best proportions are eight and five respectively. The salts, with the water, should be put into a bladder; and we think that moistening the external surface of the bladder with æther might increase the cold. If, however, water be put into a tin vessel, surrounded with other water thus cooled, and then put into the bladder with the salts, it might be reduced far below the freezing point. Other water should be kept in a state of preparation.

We cannot follow our author through all the various circum-

stances which may render the operation necessary, nor in the details of the operation itself. It is chiefly fatal from being too long delayed; and the principal symptom which determines its necessity, is, he thinks, an incipient soreness in the abdomen. All the other symptoms usually enumerated are, in Mr. Cooper's opinion, more or less fallacious. The operation itself is described very skilfully and very clearly. It would be improper to copy the description, and injurious both to the author and the reader to abridge it.

The management of a mortified intestine displays considerable ingenuity and judgement, as well by the expedients for forming an artificial anus, as those for connecting the upper and lower portion of the canal, where it is necessary to separate a sphacelated part. We have seen instances of the divided ends of an intestine uniting by the operations of nature, and may suppose that art could imitate her, though less certainly, as the parts are exposed to the air: yet it has succeeded; and, in general, transverse wounds of the intestines heal more readily than longitudinal ones. If therefore any part of an intestine must be removed, the whole canal should be cut out. Many experiments on dogs are adduced, which greatly illustrate the treatment of mortified intestines. After the operation, opium need not, in Mr. Cooper's opinion, be given, unless indicated by vomiting, or a troublesome cough. Removing or tying the hernial sac, to prevent a return of the complaint, does not succeed, and is apparently dangerous.

In large herniæ, where reduction is impracticable, dilating the abdominal ring, without opening the sac, will prevent danger from strangulation; and life may be preserved. Dr. Monro recommends this as a general practice. Small herniæ, which lie between what we call the *external* and *internal* apertures (more strictly the *lower* and *upper*), are sometimes strangulated, and require the operation. The sac is occasionally returned, without opening; but, from the statement before us, this does not seem to be the most judicious practice.

Hernia sometimes appears on the *inner* side of the epigastric artery; and this occurs often from blows on the abdomen, when the intestine descends, not through the interior or upper ring, but through a rupture of the tendons of the internal oblique and transverse muscles. Below the abdominal ring, the appearance of this tumour differs from that of the common bubonocoele, as it is situated near the penis, the spermatic cord passing on its outer side. The direction of the tumour is not oblique, tending towards the process of the ilium, but upward and backward. The spermatic cord has no connexion with it, above the ring; and the tumour descends behind it, covered with a fascia, given off by the tendon of the external oblique, not by the cremaster muscle. This kind of hernia is often accompanied with strictures in the urethra, though it is not easy to perceive the con-

nexion. The treatment and mode of operating in general will be sufficiently obvious from this description, but can only be learnt, in all its particulars, from the work itself.

Hernia occurring in the female is ascertained more clearly than in the male; and it is a less frequent accident. A difficulty, however, sometimes arises from not distinguishing between an inguinal and a femoral hernia, as the situation of the tumours is not distant, and as the modes of reducing the rupture are different. If the operator feel with his finger the course of Poupart's ligament, and find the neck of the tumour situated above its edge, the hernia is inguinal: if below, it is femoral. As in the male, the inguinal hernia of the female sometimes lies concealed under the tendon of the external oblique, not having forced its way through the ring. In this case, if strangulated, it is frequently undiscovered.

The congenital hernia, or hernia tunicae vaginalis, is now sufficiently understood. A singular case is recorded by Mr. Hey; and another occurs in the volume before us, where the tunica vaginalis seems to have been closed at the ring, while it remained open above and below. In this instance, the intestine, falling down on the inclosing membrane, pushes it below into the tunica vaginalis. In general, congenital hernia is known by the intestine being confounded with the testicle; but, when hydrocele is combined, the distinction is more difficult. The water is discovered by returning the whole contents into the abdomen, and supporting them, while the patient rises to an erect posture. The water, if any, then escapes from the tunica vaginalis, and the hydrocele is traced by the usual symptoms.

The plates are eleven in number. They represent very distinctly the different parts intended to be shown, and are perhaps more remarkable for strength and clearness, than for delicacy of execution. This, in anatomical plates, is no fault.

We must now take our leave of Mr. Cooper, whose work we need not again commend, and shall, with great pleasure, follow him in the continuation of this very curious and interesting subject.

ART. VI.—*Philosophical Transactions of the Royal Society of London. For the Year 1804. Part I. 4to. 10s. 6d. sewed. G. and W. Nicol. 1804.*

‘I. THE Bakerian Lecture. Experiments and Calculations relative to physical Optics. By Thomas Young, M. D. F. R. S.’
Dr. Young, in this lecture, endeavours to confirm, from his experiments and observations on the fringes of colours accompanying shadows, his general law formerly laid down, of the

interference of two portions of light. We think, however, that the phænomena will admit of a different explanation; and if, as we have had occasion to observe, light be coloured in consequence of its attenuation to a certain extent, we need go no further than to suppose that the expansion of the fringes attenuates the light to a degree that will admit of colour. His consequence, that, from these experiments, the system of Euler—viz. that light consists in an undulating medium—is proved, notwithstanding his challenge, we cannot admit. The whole description would require a volume; and unfortunately we cannot allow even a page. We must therefore add, with some apparent dogmatism, that the principle is by no means demonstrated; and that the present paper is no considerable ornament to the number before us. We forgot to mention that there are, from the experiments of M. Ritter, rays more refrangible than even the violet, which are, however, colourless or dark; so that, as on one side of the spectrum there is heat beyond the red rays, on the other there is a degree of light beyond the violet.

‘II. Continuation of an Account of a peculiar Arrangement in the Arteries distributed on the Muscles of slow-moving Animals, &c. In a Letter from Mr. Anthony Carlisle to John Symmons, Esq. F. R. S.’

Mr. Carlisle has endeavoured to discover some difference in the distribution of the arteries, when the motion is slow though long continued. He instances the seminal, the intercostal, arteries, and those of the diaphragm. He thinks that the peristaltic motion of the intestines may perhaps be influenced by the circuitous course of its vessels, and the motion of the iris by the circuitous course of *its* artery. Yet, were the principle true, or at least were the peculiar distribution very intimately connected with slower or more permanent action, it would be probably traced in many organs, and in very many different animals. The swimming-bladder of some fishes is supplied with cylindrical arteries, which seem to act as muscular fibres, since they are susceptible of the Galvanic influence.

‘III. An Account of a curious Phenomenon observed on the Glaciers of Chamouny; together with some occasional Observations concerning the Propagation of Heat in Fluids. By Benjamin, Count of Rumford, V. P. R. S. Foreign Associate of the National Institute of France, &c. &c.’

We must resume this subject in our review of a very extensive and important paper in a subsequent part of the volume before us. We can only at present remark, that the phænomenon noticed is a deep cylindrical pit in the ice, very slightly inclined to the horizon, which grows by degrees still deeper in the course of the summer. This pit proves, in count Rumford’s opinion, that fluids are not conductors of heat; and that

the heat is formed by the meeting of ice which gradually sinks, since ice is lighter than the water produced from it; though, from an inaccuracy of expression, he *seems* to assert that warm water is heavier than cold. The subject, however, we shall return to; yet we must add, that a pit in the ice might be equally formed, by supposing the water to communicate heat. Count Rumford, however, writes in haste, and is seemingly offended at the opposition his system has experienced.

‘IV. Description of a triple Sulphuret, of Lead, Antimony, and Copper, from Cornwall; with some Observations upon the various Modes of Attraction which influence the Formation of mineral Substances, and upon the different Kinds of Sulphuret of Copper. By the Count de Bournon, F. R. S. and L. S.’

We receive singular satisfaction from the attention paid by the scientific chemists of this country to mineralogy, a subject which has been long and unjustly neglected. This triple sulphuret is found only in one mine in Cornwall—*viz.* Huel Boys, which has never been regularly worked. It is described by M. de Bournon with singular precision. The specific gravity of this substance is 5765 superior to that of a sulphuret of copper or of antimony; but very inferior to that of a sulphuret of lead. Its primitive crystal is a rectangular tetraëdral prism, which has its terminal faces perpendicular to its axis; but the prism has never been observed by our author destitute of secondary facets. The count next pursues the varied form of this substance in the different modifications which the primitive crystal admits, throughout which, from the minuteness of the description and the want of plates, we cannot follow him.

Previous to the more particular observations on this and similar substances, count de Bournon offers some observations on the various modes of attraction which influence the formation of mineral substances. This is a curious subject, hitherto slightly touched, and is so comprehensively detailed, that we can only follow it imperfectly.

Of the two modes of attraction, that of composition and that of aggregation, the latter has the more striking effect in the formation of minerals. The first takes place in the simplest elements of bodies, not similar, but frequently opposite: in the secondary molecules thus formed, the second kind of attraction is discovered uniting them into masses perfectly homogeneous. The second kind of attraction is either a crystalline or a simple aggregation. The first may be truly crystalline, though it shows no determined form; but the fracture will at once discover its aggregate nature. The instance here adduced is alabaster: a lamellated structure evinces it to be crystalline. Sometimes these crystals hastily form irregular detached masses, which, falling to the bottom of the fluid, coalesce; as in the

granulated or the magnesian carbonat of lime. Sometimes the molecules are precipitated in a detached and confused manner; sometimes no determinate form is produced. Of the last, steatite and chalcedony are instances. Quartz occasionally shows a lamellated appearance: but our author will not admit that chalcedony is quartz only in very minute and invisibly compacted crystals. In short, he does not hesitate to deny his belief that quartz is merely an aggregate of quartzose earth; or corundum, of pure argil. On some of those points, we have formerly had occasion to offer a different opinion; but this is not the proper place for controversy. Besides the attraction between similar molecules, there exists an attraction between these and dissimilar ones. When a single dissimilar molecule unites with similar ones, the count calls it homogeneous attraction of aggregation; when a collection of dissimilar molecules unites with similar ones, heterogeneous. The effects of these various attractions are examined with some care: the conclusion only can we add—

‘ In short, it appears, that the molecules of foreign substances, introduced into mineral bodies, in the above-mentioned manner, by the heterogeneous attraction of aggregation, do not prove any obstacle to the action of the crystalline attraction. The only effect the former mode of attraction seems to produce upon the latter, is to cause the form of the substance submitted to its influence, to approach as nearly as possible to the most simple forms, or even to the primitive one, belonging to it; and, at the same time, to render those forms more constant. Thus, the magnesian carbonate of lime, and also the martial carbonate of lime, generally assume either the form of the primitive rhomboid, or that of the lenticular rhomboid, of pure carbonate of lime. Thus also, the quartzose carbonate of lime, commonly known by the name of sandstone of Fontainebleau, constantly assumes the form of the muriatic rhomboid (named by Haüy *inverse*) of the pure carbonate of lime. Lastly, in the same manner the kind of talc called chlorite, which frequently introduces itself into the axinite, almost always occasions the latter substance to assume one of its most simple forms.

‘ Those stones in which there exists no other cause of union between their particles than the attraction of aggregation, and which are known by the name of aggregate stones, furnish an example of the attractive force that is really exerted by the dissimilar molecules which enter into substances during their formation. In granite, for instance, the integrant parts, which, instead of being molecules, are become masses, are as dissimilar as possible. Yet, although no ingredient whatever contributes to unite them, (their union being brought about merely by the cohesion of their surfaces) the great degree of hardness this stone possesses, and the difficulty with which its parts are separated, when it is in a perfect state, that is to say, when its texture has not been injured by any accidental cause, are both well known. This remark may be applied to various kinds of sandstone, of schistus, &c.

‘The different kinds of attraction here described, may, I confess, be nothing more than mere modifications of one and the same power, originally belonging to matter; but this appears to me not yet sufficiently demonstrated. Supposing it, however, to be the case, they certainly exert as much force upon mineral substances, at the time of their formation, as could be exerted by attractive forces of a really different nature,’ p. 50.

‘Observations on the different Kinds of Sulphuret of Copper,’ follow. In this substance, count de Bournon considers the antimony and lead to be accidental mixtures, and introduced by the heterogeneous attraction of aggregation. The silver is also a heterogeneous admixture for this reason, that neither of these substances seems in any respect to influence the form. The antimony, moreover, in various specimens, greatly differed in its proportion. In the grey tetraëdral sulphuret of copper, iron and copper are the only metals, though sometimes antimony seems to be accidentally combined. Particles of silver are mixed, in some instances, in such a heterogeneous combination as to be visible to the eye, assisted by a lens. On the other hand, our author does not consider yellow copper-ore as a mere martial pyrite holding copper interposed, but that it is probably a double sulphuret of copper and iron, though a distinct species from the grey sulphuret. Its primitive form is a regular tetraëdron, of which the octaëdral is only a modification. The count pursues these structures, in all their varieties, too minutely to enable us to abridge his explanations, for which we must refer to the paper. Many other species of this kind probably exist, which have not yet been described; while many, with which we are acquainted, have not been examined.

‘V. Analysis of a triple Sulphuret, of Lead, Antimony, and Copper, from Cornwall. By Charles Hatchett, Esq. F. R. S.’

We need not follow minutely the author’s very judicious and accurate analysis. One hundred parts of the mineral contained 17 of sulphur; 24.23 of antimony; 42.62 of lead; 1.20 of iron; and 12.80 of copper: 2.15 parts are lost, chiefly owing to the tendency of the oxyd of antimony to adhere to glasses and filtres.

‘VI. Observations on the Orifices found in certain poisonous Snakes, situated between the Nostril and the Eye. By Patrick Russell, M.D. F.R.S. With some Remarks on the Structure of those Orifices; and the Description of a Bag connected with the Eye, met with in the same Snakes. By Everard Home, Esq. F. R. S.’

These orifices, situated between the nostril and the eye, have been supposed the organ of hearing. On examination, they appear to be peculiar to poisonous snakes, and to lead to a cavity under the eye, to which a cavity in the skull is apparently adapted. They have been found in the rattle-snake, in fifteen or

sixteen species of coluber, and in three boxæ. The cavities, as well as the eye-lids, are lined with a cuticle, which is shed with the rest of the skin. Similar bags are found in some deers and antelopes, probably (but this has not been yet clearly ascertained) in all of them. They seem intended as reservoirs for a fluid, to spread over the cornea, since in snakes there is a passage in such a direction as to favour the access of a fluid to the eye, when the head of the animal is erect.

‘VII. An Enquiry concerning the Nature of Heat, and the Mode of its Communication. By Benjamin, Count of Rumford, V. P. R. S. Foreign Associate of the National Institute of France, &c.’

Count Rumford, having long thought that the phænomena which attend the communication of heat from some bodies to others would furnish the most satisfactory method of investigating its nature, has assiduously pursued this mode of inquiry; and the present paper contains a continuation of these investigations. He first explains the structure and use of his instruments, in which we need not follow him. His chief object was to examine the different times in which heat is communicated to the surrounding air, when the heated body is covered with various kinds of clothing.

He discovered that the instrument cooled through any small given number of degrees (ten, for instance) in the same time, whatever was the temperature of the air, if the point from which these ten degrees commenced were at the same given number *above* the temperature for the time being. In order to supply the defect of observation, during accidental interruption, by interpolation, our author from observation established the law of cooling, which is represented by a curve approaching the logarithmic. If, as has been asserted, the velocity with which a hot body, exposed to cool in a cold fluid medium, parts with its heat, be as the difference of the temperature of the body and the medium, it would strictly preserve the logarithmic curve. Perhaps it may be considered as such without any material error: and then, as count Rumford observes, we may graduate a thermometer so as to indicate with certainty *equal* increments of heat.

The result of the first experiment was singular: the water which cooled to a given degree in a naked cylinder in fifty-five minutes, cooled to the same degree, in a similar vessel clothed with fine Irish linen, in thirty-six and a half. The clothed instrument received heat also faster than the naked one. When covered with a coating of transparent glue, or of spirit varnish, the effect was the same, and increased in proportion to the number of coatings so far as four. Eight coatings of spirit varnish retarded the cooling. So that the *maximum* lies between four and eight. Black paint, laid on the varnish,

slightly expedited the cooling; and black and white paint, without the varnish, seemed to have nearly the effect of the eight coats of spirit varnish: perhaps the cooling was not so much expedited. A coating from the smoke of a wax candle, though so extremely thin, had very nearly the effect of the paint. In order to render the experiment more complete and decisive, it was necessary to prevent as much heat as possible from passing through the top and the neck of the cylinder. It then became necessary to ascertain this, as well as the relative velocity with which it passed through the sides of the naked and coated cylinders. But we must content ourselves with the outline, and cannot follow its minutiae.

‘ Having found abundant reason to conclude, from the results of the experiments of which an account has already been given, that all the heat which a hot body loses, when it is exposed in the air to cool, is not given off to the air which comes into contact with it; but that a large proportion of it escapes in rays, which do not heat the transparent air through which they pass, but, like light, generate heat only when, and where, they are stopped and absorbed; I suspected that, in every case when, in the foregoing experiments, the cooling of my instruments was expedited by coverings applied to their metallic surfaces, those coverings must, by some means or other, have facilitated and accelerated the emission of calorific rays from the hot surface.

‘ Those suspicions implied, it is true, the supposition that different substances, heated to the same temperature, emit unequal quantities of calorific rays; but I saw no reason why this might not be the case in fact; and I hastened to make the following experiments, which put the matter beyond all doubt.’ P. 107.

To ascertain this fact was then the object of the thermoscope—an instrument contrived by our author, of which we can give no adequate idea. It will, however, be sufficient to observe in this place, that it is designed to show the effects of the heat of different bodies on two glass bulbs; and this effect is discovered by the motion of a bubble of spirit of wine in an horizontal tube, with which these bulbs are connected by tubes inserted into it at right angles. With this instrument, the result of the first experiment was singular. When bright cylinders, filled with water of a given heat, were presented at the same distance from each bulb, the bubble stood in equilibrium. When one was blackened the bubble was propelled from it; and the equilibrium was only restored when the blackened cylinder was removed to the distance of eight inches.

Count Rumford varied his metals, and found that, whatever was their conducting power in other respects, water, heated to a given degree, cooled in each in the same time. This, in his opinion, seems owing to their want of transparency; and he

thinks it favourable to the doctrine of undulations. Yet in an experiment where two agents are required and the efficacy of one is given, the variety must consist in the other. In fact, in the blackened and varnished instruments, there was an intermede between the vessel and the air. Air is a bad conductor of heat, but will receive it from some bodies sooner than others: and this forms the whole mystery of the blackened cylinders.

A point, however, to be determined previous to the decision of the question, is, whether bodies be cooled in consequence of the rays they *emit*, or of those they *receive*. An experiment by professor Pictet to this purpose is recorded, *viz.* that rays seem to proceed from cold bodies, which may be concentrated by a convex mirror, and affect a delicate air thermometer. Count Rumford found that his cylinders, filled with ice and snow, emitted what may be called cold rays, as the bubble in the horizontal tube moved towards the side where the cold mass was presented, and the experiment was varied in many ways. The cylinders, when blackened, cooled the ball more rapidly than those which were naked.

Our author, suspecting that animal substances would emit a greater abundance of calorific rays than a polished metallic surface, covered the bottom of his cylinder with goldbeaters'-skin, and found it necessary to remove this cylinder five times further from the ball of the thermoscope, than the polished metal cylinder, filled with water of the same heat. Similar effects followed when the cylinders were cooled.

The count next inquired whether the intensity of the action of the frigorific rays, at equal intervals of temperature, be or be not equal to the intensity of the action of the calorific rays which proceed from hot bodies. This he found to be the case; and he engages in some reflexions to show why this frigorific power was not sooner discovered. We cannot now enlarge on the subject: we think, however, we can prove that these frigorific emanations have no real existence, but that all the effects arise from the equilibrium of heat; and this from the circumstances of the count's own experiments. It is not an uncommon effect to be misled by appearances, when experiments are undertaken with a determined bias to one opinion. In consequence of this bias, our author attempts to show that the frigorific rays from cold bodies are affected in the same manner, and in the same degree, as the calorific rays from hot bodies. Several experiments of various kinds follow, with a view to the further investigation of the radiations of hot and cold bodies, and of the effects produced by them. We can mention only the more remarkable ones.

Those substances which part with heat most quickly and easily, acquire it with equal ease and celerity. As blackening the cylinder made it more readily throw off the calorific rays,

or receive the frigorific, our author suspects that the facility with which negroes bear the effect of heat, may be occasioned by their colour; and, should he be called to inhabit a very hot country, he says that he would blacken his skin, or wear a black shirt in the night. Inhabitants of cold countries, who oil their skins, may produce the contrary effect; and these customs, which we despise, may, in his opinion, be dictated by observation and good sense. On this subject, count Rumford enlarges a little; but we shall reserve our remarks, as he has promised to communicate a fuller account of his investigations and speculations on the subject. To proceed—

He next inquires whether the cooling of a hot body would not be sensibly accelerated by frigorific rays. This he found undoubtedly to be the case; but we must add, that, where the cold of the body emitting frigorific rays was less intense, and its temperature of course raised by the neighbouring hot body, the cooling was rather retarded than accelerated.

‘ From the results of these experiments we may safely conclude, that if the hot body, instead of being a conical vessel covered up on all sides except its flat bottom, had been a globe, and if this hot globe had been suspended in the centre of another larger thin hollow sphere, (this last being, at the beginning of the experiment, at the same temperature as the air and walls of the room,) the vicinity of the surface of this hollow globe, to the surface of the hot body, would have retarded the cooling of the hot body, in the same manner as the cooling of the conical vessel No. 5 was retarded in the foregoing experiments; and if, instead of inclosing the hot body in the centre of a single hollow sphere, of any given thickness, it were placed in the common centre of a number of much thinner concentric spheres, of different diameters, the time of cooling would be still more retarded.

‘ By tracing the various operations which would take place in the cooling of the hot body, in this imaginary experiment, we shall become acquainted with the nature of those which actually take place, when the cooling of a hot body is prolonged by means of warm clothing.

‘ From the results of several of the foregoing experiments we may conclude, that, supposing the thin concentric hollow spheres in which the hot body is confined to be made of metal, the cooling will be slower, if the surfaces of these spheres are polished, than if they are unpolished, or blackened: and hence we might very naturally be led to suspect, (what is probably true in fact,) that the *warmth* of any kind of substance used as clothing, or its power of preventing our bodies from being cooled by the influence (frigorific radiations) of surrounding colder bodies, depends very much on the *polish of its surface*.

‘ If, with the assistance of a microscope, we examine those substances which supply us with the warmest coverings, such for instance as furs, feathers, silk, &c. we shall find their surfaces not only smooth but also very highly polished; we shall also find that, other circum-

stances being equal, those substances are the warmest which are the finest, or which are composed of the greatest number of fine polished detached threads or fibres.

‘ The fine white shining fur of a Russian hare, is much warmer than coarse hair ; and fine silk, as spun by the silk-worm, is warmer than the same silk twisted together into coarse threads ; as I found by actual experiments, an account of which has already been laid before this Society, and published in the *Philosophical Transactions*.

‘ I formerly considered the warmth of natural and artificial clothing, as depending *principally* on the obstacle it opposes to the motions of the cold air by which the hot body is surrounded ; but, by a patient and careful examination of the subject, I have been convinced, that the efficacy of radiation is much greater than I had supposed it to be.

‘ From the result of the experiment No. 31, we might be led to conclude, that a very small part only of the heat which a hot body appears to lose when it is cooled in air, is in fact communicated to that fluid ; a much greater portion of it being communicated to other surrounding bodies at a distance ; and, in one of my former experiments, a hot body was cooled, though it was placed in a Torricellian vacuum.’ p. 148,

These observations might furnish many remarks ; but our article is so far extended, that we must be concise in our remaining account of this interesting paper, interesting even from what we suppose to be the author’s errors. One circumstance we may mention, which has occurred to us in the examination of these experiments, *viz.*—that air receives, better than it conducts, heat. What is communicated at a distance, must be conveyed by the air ; but the medium is not proportionally heated by the passage. This is, indeed, partly the opinion of the author ; and it is followed by the experiments of de la Saussure respecting the difficulty of evaporating water from the surfaces of polished vessels, which should have been attributed to their contriver, though we admit that some additional experiments are also introduced ; but it is singular that count Rumford should not have recollected that the flame of a candle is hollow, and that it does not burn on its internal surface, as is seen by the wick continuing in it unchanged.

Our author next gives, at some length, his ideas of heat and cold ; which will be now sufficiently obvious. Some of his practical conclusions are singular : the whole would be too long for an extract.

‘ In all cases where it is designed to preserve the heat of any substance which is confined in a metallic vessel, it will greatly contribute to that end, if the external surface of the vessel be very clean and bright : but, if the object be to cool any thing quickly, in a metallic vessel, the external surface of the vessel should be painted, or covered with some of those substances which have been found to emit calorific rays in great abundance.

‘ Polished tea-urns may be kept boiling hot with a much less expence of spirit of wine (burnt in a lamp under them) than such as are varnished ; and the cleaner and brighter the dishes, and covers for dishes, are made, which are used for bringing victuals on the table, and for keeping it hot, the more effectually will they answer that purpose.

‘ Saucepans, and other kitchen utensils, which are very clean and bright on the outside, may be kept hot with a smaller fire than such as are black and dirty ; but the bottom of a saucepan, or boiler, should be blackened, in order that its contents may be made to boil quickly, and with a small expence of fuel.

‘ When kitchen utensils are used over a fire of sea-coal, or of wood, there will be no necessity for blackening their bottoms, for they will soon be made black by the smoke ; but, when they are used over a clear fire made with charcoal, it will be adviseable to blacken them ; which may be done in a few moments, by holding them over a wood or coal fire, or over the flame of a lamp, or candle.’ p. 177.

‘ Black clothes are well known to be very warm in the sun ; but they are far from being so in the shade, and especially in cold weather. No coloured clothing is so cold as black, when the temperature of the air is below that of the surface of the skin, and when the body is not exposed to the action of calorific rays from other substances.

‘ It has been shown, that the warmth of clothing depends much on the *polish* of the surface of the substance of which it is made ; and hence we may conclude that, in choosing the colour of our winter garments, those dyes should be avoided which tend most to destroy that polish : and, as a white surface reflects more light than an equal surface, equally polished, of any other colour, there is much reason to think that white garments are warmer than any other, in cold weather. They are universally considered as the coolest that can be worn, in very hot weather, and especially when a person is exposed to the direct rays of the sun ; and, if they are well calculated to reflect calorific rays in summer, they must be equally well calculated to reflect those frigorific rays by which we are cooled and annoyed in winter.’ p. 179.

We shall anxiously expect the continuation of these very interesting experiments. The influence of frigorific rays from the heavens, occasioning the cold on high mountains, and regulating the temperature of the earth, may probably be reckoned among the fancies of an exuberant imagination.

‘ VIII. Experiments and Observations on the Motion of the Sap in Trees. In a Letter from Thomas Andrew Knight, Esq. to the Right Hon. Sir Joseph Banks, Bart. K. B. P. R. S.’

Our author, in a former paper, expressed his opinion that the vessels of the bark, which pass from the leaves to the extremities of the roots, were, from their organisation, better calculated to carry the fluids they contain towards the roots, than in any other direction. The chief argument, at that time, arose from the idea that the forms of trees evinced the compound

and contending actions of gravitation, and an intrinsic power, in the vessels of the bark, to give motion to the fluids passing through them. Some facts are now adduced in support of this opinion. They are ingeniously introduced, and seem readily to admit of the conclusions which the author attempts to draw from them. Mr. Knight accomplished ingrafting a fruit-stock of a vine into the leaf-stock; but the experiment did not perfectly succeed, nor did the fruit ripen in perfection: it was a foster child which the parent would not kindly receive.

The 'Meteorologic Journal' concludes this first part of the volume. The thermometer (an exposed one, of Six's construction) varied from 86° in July, to 19° in January and in February; but the highest number, as usual, requires correction; and the true elevation should not exceed 81°. The mean heat was 50.5: the mean heat of April 50.4. The barometer varied from 30.53, in December, to 28.67 inches, in November; the mean was 29.91. The hygrometer varied from 99 to 61; the mean height, 79.8: a great degree of moisture. The rain was only 17.922 inches.

ART. VII.—*Journey into South Wales, through the Counties of Oxford, Warwick, Worcester, Hereford, Salop, Stafford, Buckingham, and Hertford; in the Year 1799.* By George Lipscomb, Esq. 8vo. 8s. Boards. Longman and Rees. 1804.

THIS author has already passed in review before us, and has, in our own opinion, received a candid attention, and at least a due share of praise. What then must have been our surprise at seeing his first chapter in a flame against reviewers in general? but with such violence of censure, such indiscriminate invective, that no one who has been a reader of reviews, could guess its object; nor do we now know what the aim of these firebrands really is. Reviewers are become, it seems, political squabblers, and have lost the respect once paid to them. Let it be so; they have at least been divided into parties, and authors, it is presumed, will not complain of those who have espoused their own side. 'Excellently well observed,' says Swift, 'when an author agrees with me; but, should we differ, I pronounce him to be mistaken.' We have more than once met Mr. Lipscomb in different walks of literature; but not till the perusal of the present volume, did we know or suspect his political principles. Had we known them, we should not have supposed that they had any connexion with his other opinions; and should we have disapproved them, we should not have thought this a ground of censure on subjects with which they are not concerned. After so pointed an attack, however, we

must be cautious. The author shall review his own work : he shall speak for himself on most occasions ; and the public shall decide. Our observations (for they must be interspersed) will consequently have only so much weight, as the evidence we produce will afford them.

We consequently pass over the first chapter ; though to be styled partial, contemptible, and prejudiced, is not pleasing or conciliating, especially when the only foundation for the charge, that we can recollect, is a calm and respectful attention to Mr. Lipscomb's labours, and a general though not an indiscriminate commendation. This account he must settle at home ; and, perhaps, when he asks himself, why he scattered about his firebrands with such indiscriminate fury, and the only answer he can find, is that it was from thoughtlessness or 'sport,' he will discover that either cause subjects him to the same imputation. *He* honestly aims at informing and instructing the public : *we* have the same object. He proceeds with a consciousness of rectitude in *his* career : we can lay our hands on our bosoms, and solemnly appeal to the same heart-felt consciousness. He rails : we only expostulate.

Mr. Lipscomb proceeds to Oxford, Stratford, Droitwich, Worcester, Malvern hill, Bath, Hereford, Presteign, and New Radnor. Having now entered the principality, he crosses the Wye, proceeds to Hafod, and, having visited Plimlimmon, to Aberystwith, Newcastle, Carmarthen, Abergwilly, Llandovery and Brecon. Returning from Brecon, he again arrives at Presteign, goes to Ludlow, Bridgenorth, Dudley and Birmingham, and returns through Warwickshire and Buckinghamshire, to London.

This route we have frequently followed with some intelligent and interesting travellers, and, on this account, may have found little novelty and less interest in the present volume. But we have determined to let the reader judge for himself, and we shall therefore select a few specimens. Should the reflexions be found trite and trifling, should the information be inconsiderable, our readers may, at least, be assured that we have not culled the worst passages : and, whatever opinion they may form, the author cannot '*say we did it.*'

'The scenery from the top of Malvern, has frequently been commented on, and two poems have lately made their appearance on the subject. After this I ought, perhaps, to content myself with silently admiring what my pen is so inadequate to describe ; and the rather, as the view which I had of the country, was obscured, in every direction, by a cloudy atmosphere. I cannot, however, omit to remark, that even the windings of the Severn itself, and the famed meads through which it flows, do not compensate for the want of bold and striking scenery. There are no forests, no lakes, no woodland prospects, no rough and boldly-projecting eminences, no rocks ; nor that waving line, which beautifies a distant horizon, and like the zone of

the fair goddess, adds the delicacy of elegance to the delights which it encloses.

'The ground on the south side of Malvern is broken by gentle inequalities, and innumerable orchards and hop-gardens are interspersed among the riches of Ceres.

'The prospect in an opposite direction is more crowded: the towns of Tewkesbury and Evesham, the one distinguished by its church, at a hazy distance, and the other by a bridge, are features of importance; and the eye is involuntarily attracted to the spires and buildings of Worcester, which recall the memory of past events, and picture to the imagination those great and serious scenes which have, in some measure, rendered it classic ground.

'Malvern hills were part of the ancient forest of that name; and the stump of a tree, of considerable size, is still visible, not far from the very summit. Thus Drayton or Ben Jonson, I forget which, says,

'Pan may go pipe in barren Malvern chase.'

'There may also be traced the course of a small trench, which was made to divide the forest from the land of the bishop of Hereford, in the time of Gilbert de Clare, earl of Gloucester, son-in-law of king Edward the First, to whom that monarch had given this domain; which, when it thus became the property of a subject, lost its royal appellation of forest and took that of Malvern Chase.

'The air on the summit of the hill is excessively mild and pleasant; so that the fatigue of ascending is almost immediately cured, by the bracing and restorative coolness of the atmosphere.

'The degree of temperature on the top and at the foot of this eminence varies considerably; and they who descend very rapidly, sometimes feel a slight degree of faintness not unlike that which happens to persons of delicate habits, on going into a crowded room, or exchanging the freedom of breathing in the open air, for the confinement and closeness of a theatre.

'These hills give birth to two famous springs, which have been much resorted to, in cutaneous diseases. They are remarkably light and pure, slightly chalybeate, and in their effects gently diuretic.'
p. 56.

Perhaps the legends of the flying serpents might have been omitted, as well as the sapient reflexion, that there may have been some such serpent, but not so very large, or so very very terrible. We dare not however rest on this point, lest, if the author may have chanced to characterise Bonaparte under this allegorical figure, our political opinions should bring us within the scope of his censure in another publication.

In the journey to the principality, we meet with little novelty: yet of that little we will not be greedily covetous. We find, that, in Herefordshire, the author made it a rule to drink nothing but cider; that guns, laid horizontally, are, on *that account*, harmless; and that the fate of poor Tom Rogers, frozen in the snow, was '*singular*.' We wish most sincerely that it were so.

In the following passage, we find the description of scenery and a cascade that we do not recollect in any former author. Here also the reader is not without his *singularities*: one is, that trout are found not more than a quarter of a mile from the source of a spring, which supplies the cascades; another, that when *suddenly* elevated *above* frightful declivities &c., we become giddy. We believe the same effect arises from a more *gradual* elevation, even over the smoothest plain.

‘Pursuant to the instructions which had been given us, we ascended between two tremendous cliffs, composed of naked rocks and slate, among which trees of various sizes hung suspended by their roots over the most awful chasm my eyes ever beheld.

‘The effect is greatly heightened by the colour of the rock, which is almost black. The impending precipices, which appear in some places ready to overwhelm the intrusive traveller, and the rough grandeur of the prodigious masses here and there detached from the great body of the mountain, added to the stupendous height to which the eye is directed, altogether filled us with a degree of astonishment and horror scarcely to be paralleled.

‘From a break in the extremity of this fissure, but not from the very top, a fine cascade fell gracefully, for about seventy feet, over the rough projecting edges of the rock, and variegated the scene with a sheet of foam.

‘There are five or six smaller cascades, which are not seen from below, but which, in wet weather, or after the melting of snow, are all objects highly deserving of attention.

‘It is remarkable that trout of a very large size, are found in all parts of this singular fall,—even in the chinks and crevices of the rocks which form the uppermost cascades, and which are not more than a quarter of a mile from the source of the spring which supplies them.

‘Directly above the great water-fall, is an insulated rock, nearly twenty feet high, whose basis is worn to a slender pillar, by the percussive force of the cataract,—which is called “Water break its neck.”

‘The mangled carcasses of two sheep and a goat were melancholy proofs of the danger to which these harmless animals are exposed, in feeding, by night, too near the brink of this dreadful chasm.

‘The shepherd recommended us, as the day was clear, and we had sufficient time to avoid the imminent danger of being on the mountains after dark, to pursue a narrow path which he pointed out, along the side of this Alpine ridge, and which, he said, would re-conduct us into the turnpike road from which we had deviated.

‘Never, surely, was a sight more noble or more interesting than the bold and tremendous view which soon presented itself.

‘We climbed the heights without difficulty, but were, on a sudden, elevated so prodigiously above precipices, glens, and frightful declivities, that the head became giddy at the sight.

‘The surface of the mountains was here smooth as a carpet,—there, rugged, and broken into a thousand fissures;—here, a stream precipitated itself from the giddy eminence,—there, a patch of snow, strik-

ingly contrasted the verdure of the downs, while sheep innumerable were scattered over the whole face of the country, and dotted the wide expanse in a style of inimitable beauty.

'With cautious steps we paced the track assigned us, and fortunately reached the level country without one false step,—for one false step would have been irretrievable.' p. 107.

The following observation, at the conclusion of the chapter, must not pass without the severest reprobation: nor can we forbear to observe, that the illiberality of the comment is more censurable than the injustice of the original remark. Admitting however the whole, is compilation, the labour of the hands, the dexterous use of scissors and paste, the criterion of literature?

'At Rhyader we observed a building of some size, used as a dissenting meeting house. On the door was pasted a prospectus of the Bible, in the Welsh language; from which I infer that the literature of this part of the country is chiefly in the hands of the dissenters, as well as in England.

'This remark may, perhaps, require some explanation, or, at least, there may be a few critics who will be inclined to cavil at it;—to these I shall only observe, in the very words used by a respectable publisher in London some time since, "The clergy of the church of England are, in general, too rich, too proud, too ignorant, or too lazy to attend to the business of compilation." p. 115.

The description of Hafod, and the scenery in the neighbourhood of the Hafod-arms, rises above the insipidity of many other passages: yet we are not here left without a little of the affectation of refined sentiment, in certain reflexions on a paroquet, that, because he happened to be fond of strangers, *naturally* leads the author to the subject of the metempsychosis.—Mr. Lipscomb was unfortunate in the weather, and was prevented by it from enjoying the prospect which the majestic pic of Plimlimmon presents. The cap was enveloped in fogs, but the space is not lost: the pages are filled with reflexions on the poverty of the mountaineers, the havock and distresses of war.

The journey, till we again arrive in England, offers nothing that can for a moment detain us. The ruins of Dudley castle occur; and we cannot, of course, escape a declamation on the gloomy dignity of the feudal baron, compared with the cheerful active industry of the iron-works. We fear our author saw only the outside of the cottages, or sketched his design from fancy. Health, with its attendant blessings, competence and cheerful industry, are not always found within. Manufactures of this nature are ruinous to the constitution; and the pittance of each day, if not consumed by its wants, is anticipated by the most pernicious luxuries. 'Corruption, barbarism and vulgarity' are never the inmates of healthy, contented, industry: increase of population is the only part of the picture which seems to be copied with fidelity.

The description of Birmingham furnishes us with little that is interesting; and indeed nothing appropriate to this vast magazine of manufactures, from the most trifling to the most important, except that at Birmingham the war-chariots, the battle-axes, &c. of the ancient Britons were probably manufactured. The opposite opinion may be supported, on grounds equally probable.

Warwick castle is noticed at great length; and we have Sterne's 'Captive' expanded through several pages. This declamation at least is misplaced; since, in the author's own words, scenes of this kind are *truly* the unsubstantial visions of poetic fancy, for we know not that this *was* a dungeon, or that any captive was ever confined there. It may have had many other uses.

The remainder of the volume is not very interesting. It consists of materials collected on another occasion for the three hundreds of Ashington, though these materials are little more than a collection of epitaphs: indeed, on every occasion, the trade of the book-maker is too conspicuous; and sentimental reflexions, often of the most trite and common kind, are introduced with little art, and answering no purpose but to add to the number of pages, continually disgust us. The following are of a better kind, but are protruded by merely observing the tomb of Peter the wild boy, the savage caught in the woods of Hanover.

'If we contemplate this individual as something above the brute creation, as the apparently connecting link of that great chain which binds all nature together in its folds, we shall feel a degree of wonder and admiration at the nice gradations by which the different orders of beings are advanced above one another in mental powers, and corporeal excellence. If we look on him as the lowest of the human race, we shall superadd to that reverential awe which the extraordinary display of the providence of God naturally inspires,—an humiliating sense of the imbecility of mortals: it will teach us rightly to appreciate those faculties of the mind by which the higher orders of creatures are distinguished; and lead us to a useful and prudent exercise of those qualities and functions which are sparingly distributed among the sons of men.

'If the appearance of the maniac be of all distressing scenes the most humiliating, next to it must be the sight of those endowed with very slight powers of reason and judgment.

'Idiotism surely cannot be seen by the proudest among us without inward mortification at the insignificance of the human character; without urging a comparison between its weakness, and the power which called it into life.

'The one debasing itself to the earth, from whence it was animated, futile, dependant, wretched;—the flower of a day, the sport of fortune, the spark of accident! the other, great without limits, good without measure, omnipotent, and eternal!' p. 437.

The language of this volume is often exceptionable, and distorted by affected refinements. A road is said to '*bifurcate*,'

an opinion to be 'meliorated,' bogs and marshes to 'disdain' the 'foot of man;' with numerous similar prettinesses, mistaken for elegance. In short we know not when we have experienced so much disgust; when we have waded through so many pages with so little profit; when we have observed a field where the gaudy flowers are so numerous, and the really beautiful and useful plants so few.

ART. VIII.—*The History of the Roman Wall, which crosses the Island of Britain, from the German Ocean to the Irish Sea. Describing its antient State, and its Appearance in the Year 1801. By W. Hutton, F.A.S.S. 8vo. 7s. Boards. Rivingtons.*

VARIOUS circumstances have contributed to call off our attention from the works of this lively and respectable veteran, whose 'sear and yellow leaf' of life is well employed in little excursions, which he describes with peculiar spirit and naïveté. Three of these tours now lie before us, which we shall examine in their order; but must, at present, confine ourselves to the first; which relates to the Roman wall, that crosses the northern parts of this kingdom, from North Shields to Solway Frith. This wall seems to have haunted Mr. Hutton's fancy from his early years. Not the tomb of Amandus and Amanda so filled, of yore, the mind of the facetious, the whimsical Yorick: but more happy our author; for he found at least the remains of a wall on which he might drop a tear; the ruins of another Troy, over which he might heave a sigh.—This 'wonderful structure,—the united work of a commander in chief and two emperors, assisted by three powerful armies, and aided by a long series of years'—he at last visited at the age of seventy-eight, having 'walked 600 miles to see a shattered ruin!'

Mr. Hutton blames, with equal justice and severity, the usual dry forbidding style of the antiquary. He has pursued a different path; and we shall select, as a specimen of his manner, some of the first pages.—

'This first, and most remarkable piece of antiquity in the whole island, is known by several names, some of them erroneous. It bore that of Agricola, which is now lost. The Picts Wall; but this seems inconsistent, for they had no concern with the wall, except to pull it down; and I think it should rather bear the name of the man who built it up. Sometimes Hadrian's Wall; but I cannot see why a bank of earth should bear the name of a Wall. Our idea of a wall comprehends an erection of brick or stone. Perhaps Hadrian's Bank would be more in character, as agreeing with the materials of which it is composed. Severus's Wall is more proper, because he erected

the stone wall, part of which is remaining. It is often called The Roman Wall, and, by way of pre-eminence, The Wall.

‘That *man* is born a savage, there needs no other proof than Severus’s Wall. It characterizes two nations as robbers and murderers. Nineteen in twenty of our race sustain half this character during life. Some individuals correct the crude passions, adhere to justice, and avoid whatever is worthy of blame.

‘The first intentional act of a child is an attempt to scratch the eyes of its mother; the next, wilfully to disobey orders; another, to gripe a young cat round the neck, and enjoy with a smile, the agonies of death; a fourth, forcibly to take the play-things from a boy less than himself, and, should the loser complain, toss his hat into the street, and kick his posteriors. To punish the brute creation opens a wide field for ferocity; as, impaling insects, winging butterflies, and, if possessed of a whip, never to let a dog pass without using the lash.

‘The next step, as he rises into years, is to hunt after property not his own, which he tries to acquire by deceit, chicane, finesse, and, if he cannot accomplish it, would take a pleasure in destroying it, that another may not possess it. Should pride, or influence, prompt him to act fairly, only increase the temptation, and you find the rogue. Thus nineteen in twenty declare war against the creation.

‘This Wall is also a clear proof, that every species of cruelty that one man can practise to another was here, and pronounces the human being as much a savage as the brute. This place has been the scene of more plunder and murder, than any part of the island, of equal extent. During four hundred years, while the wall continued a barrier, this was the grand theatre of war, as well as during ages after its destruction.’ p. 1.

Whether the wall be a tacit compliment to the courage of Scotsmen, as also what share of the title of barbarian the borderers on either side possessed, we shall not now stop to inquire. Our author shortly explains the reasons for establishing a barrier of this kind: and, as the sea on either side abridged the labour, and the remains of the former mound strengthened the wall, he supposes this the motive why the Roman emperor chose the present spot, and relinquished a great extent of fertile country, which was his own by conquest. The wall was about eight feet wide and twelve high to the battlements, which rose about four feet more. The ‘stations,’ ‘castles,’ and ‘turrets,’ are next described. The whole must have occupied more than five square miles, or than 3000 acres; cost, in our author’s opinion, one hundred millions of our money, and required no less than thirty years to complete it. The length was seventy miles: it was ‘furnished with eighteen cities, eighty-one castles, three hundred and thirty turrets, with their mounds, roads, ramparts, and astonishing apparatus.’ Various fortified castles, to which roads led from the wall, were in the interior parts, so that the whole was a chain of fortifications. The entire island of Great Britain could not

have been of half the value to the Romans, which the construction and maintenance of these works must have cost.

Mr. Hutton pursues the history of his favourite object to the time of its destruction, the irruption of the Scots, and the varied scene of plunder and murder which the history of these bordering lands for ages presented. They scarcely at this moment display the smiling scenes of peace and cultivation; and, long within our own memory, were cheerless, barren, and desolate. The history is brought down to the Union, and the remembrance continued beyond it by the record of the boys' play, which they style *The Raid* (inroad), or Scots and English.

The author's tour begins at Sutton; whence he passes through Litchfield, Warrington, Liverpool, Lancaster, across the Kent Sands to Newby-Bridge, at the bottom of Winandermere, and thence proceeds to Penrith and Carlisle. The description of these towns is slight; and the bulk of the work is increased by the little artifices of the printer, who often thinks the account of one town sufficient for a page, though consisting only of three or four lines. We shall select a brief sketch of the prospects near Winandermere.

'I had now to walk up this charming lake, in one of the finest mornings Nature ever made, upon one of the best roads ever constructed, though uneven, and composed of the best materials the earth could produce.

'To form an idea of the scene before me, the stranger may imagine to himself a valley between two mountains, which range parallel to each other, and extend more than twelve miles, and whose summits of barren rock are about four miles asunder. Their declivities are woody, and sometimes rough; sprinkled with farms in high cultivation, of perhaps one hundred acres each, and houses which indicate plenty and ease. The bottom, which is from one to three miles over, is the height of rural beauty, extending to the verge of the lake, and consisting of woods, fertile meadows, and gentlemen's seats. In this centre lies the charming lake, whose surface was as smooth, pleasant, and clear, as a looking glass, with a smiling face before it. Not a breath of air to cause a wrinkle, but a bright sun illuminated the view. If an assemblage of mountains, romantic rocks, extensive prospects, fertile vallies, ornamental woods, elegant seats, with a grand expanse of water, can compleat a landscape, it may be found here.

'The lake is said to be ten miles and a half long; I have reason to think it is twelve, and from a quarter of a mile to one mile and a half wide, not varying much from a strait line. The head, near Ambleside, seems as wide as any other part; but the foot, at Newby-Bridge, is narrow.' p. 141.

At Carlisle our author arrives at the Wall! not 'the wall, the vile wall, that did the lovers sunder,' but the famous wall built by conquerors for defence!—by the masters of the world, to guard against the incursions of a few undisciplined tribes. He ex-

amines this structure from Carlisle to Newcastle, and in a contrary direction: but the description begins from its eastern extremity. This, however, we cannot follow minutely. We suspect that we have not the true antiquarian relish; for we own that we approve the conversion of the ditch into potatoe grounds, which the owner allows for three years to those who will bring them into a state of cultivation. We shall select a specimen of some curiosity, which will give a general idea of this ancient structure.

'All our historians have failed in two points: they have not given us the dimensions of the mile-castles, which always joined the wall, and were from twenty-two to twenty-four yards square; nor distinguished the works of Agricola from those of Hadrian; but have confused both, under the name of the latter.

'There were four different works in this grand barrier, performed by three personages, and at different periods. I will measure them from south to north, describe them distinctly, and appropriate each part to its proprietor; for, although every part is dreadfully mutilated, yet, by selecting the best of each, we easily form a whole; from what *is* we can nearly tell what *was*. We must take our dimensions from the original surface of the ground.

'Let us suppose a ditch, like that at the foot of a quickset hedge, three or four feet deep, and as wide. A bank rising from it, ten feet high, and thirty wide in the base. This, with the ditch, will give us a rise of thirteen feet at least. The other side of this bank sinks into a ditch ten feet deep, and fifteen wide, which gives the north side of this bank a declivity of twenty feet. A small part of the soil thrown out on the north side of this fifteen feet ditch, forms a bank three feet high, and six wide, which gives an elevation from the bottom of the ditch, of thirteen feet. Thus our two ditches, and two mounds, sufficient to keep out every rogue, but he [*him*] who was determined not to be kept out, were the work of Agricola.

'The works of Hadrian invariably join those of Agricola. They always correspond together, as beautiful parallel lines. Close to the north side of the little bank I last described, Hadrian sunk a ditch twenty-four feet wide, and twelve below the surface of the ground; which, added to Agricola's three feet bank, forms a declivity of fifteen feet on the south, and on the north, twelve. Then follows a plain of level ground, twenty-four yards over, and a bank exactly the same as Agricola's, ten feet high, and thirty in the base; and then he finishes, as his predecessor began, with a small ditch of three or four feet.

'Thus the two works exactly coincide; and must, when complete, have been most grand and beautiful. Agricola's works cover about fifty-two feet, and Hadrian's about eighty-one; but this will admit of some variation.' p. 173.

'Thus Agricola formed a small ditch, then a bank and ditch, both large, and then finished with a small bank.

‘Hadrian joined to this small bank a large ditch, then a plain, a large mound, and then finished with a small ditch.

‘Severus followed nearly in the same line, with a wall, a variety of stations, castles, turrets, a large ditch, and many roads. By much the most laborious task. This forms the whole work of our three renowned chiefs.’ p. 179.

Let us copy one trait of Mr. Hutton’s enthusiasm. It occurs at the fifth station, Halton Chesters.

‘I now travel over a large common, still upon the wall, with its trench nearly complete. But what was my surprise when I beheld, thirty yards on my left, the united works of Agricola and Hadrian, almost perfect! I climbed over a stone wall to examine the wonder; measured the whole in every direction; surveyed them with surprise, with delight, was fascinated, and unable to proceed; forgot I was upon a wild common, a stranger, and the evening approaching. I had the grandest works under my eye, of the greatest men of the age in which they lived, and of the most eminent nation then existing; all which had suffered but little during the long course of sixteen hundred years. Even hunger and fatigue were lost in the grandeur before me. If a man writes a book upon a turnpike road, he cannot be expected to move quick; but, lost in astonishment, I was not able to move at all.

‘Upon this common, which is very high ground, I more than once observed some of the facing stones of Severus’s wall under my feet, just as the Romans placed them, which proves that the road is raised so high, as to bury some part of the wall; this simple sight I could not observe without surprise and pleasure.’ p. 200.

Our author’s tour is entertaining in many respects, and in some instructive: but we have room for no further extracts. The antiquary has perhaps already examined the whole. The work is closed with some remarks on preceding authors, the mode of building the wall, the nature of the stone, and a list of stations; with the intermediate places from east to west. The work is evidently Roman, and differs in no part of its construction from other remains of Roman masonry. The stone is of two kinds: a whitish of a flinty texture, when broken nearly of the colour of lead; and, towards the west, a stone of a softer nature, brown, and inclining to the colour of saffron. Both kinds, contrary to the assertions of antiquaries, are found on the spot.

Our author returns through Shap, Burton, Wigan, and Newcastle under Line, to Birmingham; and we leave him with regret; but we shall soon rejoin him in his way to North Wales, and again accompany him to Scarborough.

ART. IX.—*The complete Navigator: or, an easy and familiar Guide to the Theory and Practice of Navigation, with all the requisite Tables, &c. &c. Illustrated with Engravings. By Andrew Mackay, LL. D. &c. 8vo. 10s. 6d. Bound. Longman and Rees. 1804.*

ART. X.—*A Collection of mathematical Tables, for the Use of Students in Universities and Academies, for the practical Navigator, Geographer, and Surveyor, for Men of Business, &c. By Andrew Mackay, LL. D. &c. 8vo. 7s. Bound. Longman and Co. 1804.*

A RECOLLECTION of the pleasure we derived from the examination of this author's ingenious treatise on the longitude*, occasioned our taking up the volumes before us with high expectations of being now gratified, at least in an equal, if not in a superior degree: we are sorry that those expectations are by no means realised. The work certainly contains some useful rules, and well-chosen examples; but its general merits fall far below the standard by which we intended to estimate the value of any work of Dr. Mackay. The author's professed object in the publication of this treatise shall be stated in his own words. After speaking of the importance of navigation to a commercial state, and the consequent regard that is likely to be paid to those works which treat upon it, and observing, that, although the books on this subject are very numerous, yet 'there is still room for great and valuable improvements, and especially in the simplification of the practical rules and the accuracy of the tables and calculations,' he proceeds to remark, that—

'It is, no doubt, an unpleasant and a most ungracious office to expose the faults of other writers: yet the author is compelled to say, that, in the respects above-mentioned, almost all the common books on this subject are grossly deficient: and this being the case, how great must be the additional risk incurred by the mariner, while depending for his preservation upon such authors and their writings? He is well aware, however, that there are works of a very contrary description; but they are either too expensive to be purchased, or, being published in a foreign language, cannot be understood by the generality of seamen. It has, therefore, been long a favourite object with the author, who, from a very early period of life, has addicted himself almost entirely to the study of mathematics, astronomy, navigation, &c. to offer to the public a popular, low priced, practical work, in which those mistakes might be avoided, those errors rectified, and the danger, in consequence of them, to the lives and properties of so many of our brave countrymen, at least, considerably lessened, if not altogether prevented. How far he has been successful

* See the Critical Review for August, 1794.

in such an undertaking, the public must determine. But, proceeding upon such motives, and exerting his best endeavours in such a cause, he thinks he has some claim to their indulgence. For, if he be able to execute what he proposes, in a way superior to others, he flatters himself that he cannot bestow a more valuable present on the British islands.' p. vii.

In order still further to convince the public that such a work as our author's is still a *desideratum*, he next takes the 'disagreeable liberty' to exhibit a few of the errors of late writers on the same subject: the exposure of which occupies about eight pages. The mistakes are selected from the performances of Wilson, Harris, Moore, Bowditch, Nicholson, and from the *Encyclopædia Britannica*. Some of these errors had been already held up by the author to public view, at p. 201, vol. i. on the Longitude; and particularly the blunder in the *Encyclopædia Britannica*, which was no less than of $21^{\circ} 15'$! The doctor having thus discharged his 'ungracious office' of finding fault with others, gives the following account of his own undertaking.

* From what has been said, it is hoped, that the necessity for a more correct compendium on navigation is apparently obvious. On the present work, whatever merit it may possess, the author can at least affirm, that he spared neither labour nor expence in order to render it deserving of the public attention, and as perfect as possible. It is divided into six books, in the following manner.

'Book first contains some definitions and principles necessary as an introduction to navigation; an account of the various instruments which have been proposed to ascertain the distance run in a given time; the description of a steering compass; a brief account of the tides, with various methods of finding the time of high water at a known place; the description of the common Gunter's scale; a few of those definitions and propositions in geometry, necessary to understand the theory of navigation; also plane trigonometry.

'Book second contains the several sailings commonly used in navigation. The five first of these sailings, namely, plane, traverse, parallel, middle latitude, and Mercator's sailings, are resolved by construction, calculation, inspection, and by Gunter's scale. The other sailings being less used are, therefore, only resolved by the two first of these methods. It was intended to have added the method of resolving the various problems in navigation by the sliding Gunter; but as the author has already published a treatise expressly on that subject, the reader is, therefore, referred to it for the necessary information. To this second book are added the manner of constructing and using charts.

'The third book contains the description, rectification, and manner of using Hadley's quadrant and sextant, with the method of finding the latitude and longitude of a ship at sea, and the variation of the compass from observation.

'In the fourth book is an account of a sea journal, with precepts for performing the same, exemplified in a journal proper for a long voyage.

‘The fifth book contains the application of trigonometry to the mensuration of heights and distances; the method of surveying coasts and harbours; an account of the winds; on predicting the weather.

‘Book sixth contains the tables, with an explanation prefixed.

‘Throughout the whole of this work the greatest care imaginable has been used in order to render it correct, and very particular attention has been paid to the tabular part; but the great distance of the author from the press, being upwards of five hundred miles, has been rather against him. Some things of very little importance, and which make no part of a course of navigation, are to be met with in books on this subject: these are either entirely omitted, or are very slightly treated in this work, in order to give room for others of much more consequence. The author, however, very much regrets that it was not consistent with the limits of his plan to enlarge more upon various parts of this work; yet he flatters himself that the mariner will find as much information upon each of the articles as could be found in an elementary treatise of its size, and that nothing material has been omitted. The tables are also more extensive than in any other book upon navigation hitherto published.

‘It has been the practice with some of the modern writers on navigation not to mention any other work on the same or on a collateral subject, where the student might gain more information. The author of the following work has, however, been always of a different opinion; being very certain that no treatise on navigation extant contains all the information necessary to be known by the navigator, in whom the mathematician, the astronomer, geographer, and natural philosopher ought, evidently, to be concentrated. He, therefore, has given many references to other works for more ample information on those subjects which the limits of his plan did not allow him to treat more fully.’ p. xvi.

Our opinion coincides with that of Dr. Mackay as to the utility of references to other works for more ample information: for, on many points intimately connected with navigation, the reader of the present treatise must often be obliged to turn to other books. But the performances to which the doctor seems fondest of referring, are such as in general are very ill fitted for the perusal of the mariner, or of any person who has not some tolerable pretensions to literature and science. We will instance a few:—Newton’s *Principia*, Sejour’s *Traité Analytique*, Martin’s *Philosophia Britannica*, Goimpy’s *Remarques sur le Pilotage*, Voyage towards the North Pole, Dechale’s *Mundus Mathematicus*, Hook’s *Philosophical Experiments*, Baron Masere’s *Scriptores Logarithmici*, *Encyclopædia Britannica*, *Philosophical Transactions*, Hutton’s *Mathematical Dictionary*, Newton’s *Optics*, Derham’s *Physico-theology*, Pliny, Virgil, *Observations sur les Signes Avantcoureurs par Changeux*, *Coleccion de Tablas por Don Joseph de Mendoza y Rios* published at Madrid. We shall not be suspected of a wish to insinuate that the majority of these performances are useless or trifling; for, on the con-

trary, it must be manifest that we approve most of them as highly curious and valuable: but we object to their being recommended to the practical navigator. To complete the absurdity, we almost wonder that the author did not refer to those immortal productions of genius, the Iliad, the Odyssey, and Paradise Lost. Had he pointed out to the notice of the seaman the admirable treatise on navigation by Robertson, as improved by Wales, it would have been of more essential service than all his other references put together.

But it is time to speak a little more particularly of the execution of the work before us. Book I. commences with the principles of the sphere, and the figure and magnitude of the earth; in which the author proceeds in a retrograde order: for at the outset we are presented with definitions of axes, poles, great circle, equator, latitude, longitude, meridian, &c. founded upon the hypothesis of the earth's sphericity and rotation, before it has been shown, or even affirmed, that the earth is spherical and possessed of diurnal motion. After the definitions and some problems, the proof of the earth's sphericity is attempted: it is very lax and unsatisfactory, and, setting aside the allusion to the observations of navigators, and the Newtonian theory of gravitation, proves nothing more than that the earth is not flat: were it cylindrical, or conical, or in the shape of almost any solid of rotation, the phenomena grossly stated by Dr. Mackay would still be found to present themselves in a similar manner. This first book, however, presents some useful information: but that part of it which is appropriated to plane trigonometry is very scanty and inelegant.

Book II. 'containing the principal sailings in navigation,' and the construction and use of sea charts, occupies eighty pages: and is, in our opinion, the best part of the work; the rules being clearly expressed, the examples properly chosen, and the calculations pretty accurate. But we think it singular that the author should take no notice whatever of *great circle sailing*. There was, it is true, no occasion for entering diffusely into the discussion of this branch of sailing; but a brief solution of the different cases of the most useful problems, such, for instance, as our author has introduced from Robertson, into the article NAVIGATION in the *Encyclopædia Britannica*, might have been advantageously inserted in the present volume.

In the third book we meet with scarcely any thing but what has previously been laid before us by the author himself in his Treatise on the Longitude, and the article in the *Encyclopædia Britannica* just alluded to. It commences with a description and use of Hadley's quadrant, very nearly the same as in both the other performances. Its second section, on finding the latitude, may be seen almost verbatim between pages 288, 309, of vol. i. on the Longitude. The description of the sextant from pages

58, 64, of the same : the rules for finding the longitude, abridged from pages 97, 170, of the same : and the description of the azimuth compass, with the methods of finding the variation, (excepting only two or three problems) may be seen between pages 319, 333, of the same. And we are much mistaken if the plate of the azimuth compass, called here plate VI., is any other than the plate VIII. of the other book, with the bare alteration of the numerals. This is something like showing us an old friend with a new face, and is highly unjustifiable. When an author filches from his own performances, he runs no risk of calling forth the anger of a brother author ; but if he at the same time, by frequent references to the book from which he copies, hold out strong inducements for the purchasers of the latter work to become also purchasers of the former, he takes a very unfair advantage of the good nature of the public, instead of acting up to his professions of '*bestowing a valuable present on the British islands.*'

In the fourth book, the author gives a concise, but neat account, of the nature and use of a Ship's Journal ; with general rules for performing 'a Day's Work.' The whole is exemplified by a 'Journal of a Voyage from England to Madeira ;' concluding with a kind of lottery-office-keeper's bait, which is as follows :

'This journal is performed by inspection, agreeable to the precepts given. Other methods might have been used for the same purpose : particularly that by the *Sliding Gunter* ; which will be found to be very expeditious, not only in performing a day's work, but also in resolving most other nautical problems. See THE AUTHOR'S *Treatise on the Use of that Instrument in Navigation.*' p. 222.

The fifth book opens with a few common problems on the mensuration of heights and distances. Among them, however, we observed an improved solution to the well-known problem, in which are given three bearings of a ship sailing upon a direct course, and the intervals of time, to find the course steered by that ship, and the time of its nearest approach to the observer. The directions for surveying coasts and harbours, and the account of the relative situations of the principal fixed stars, are executed in a manner which would have been creditable to the author, had they not been stained with '*See Longitude, p. 18. See the Author's Treatise on the Longitude.*' But the vexation we felt at stumbling upon these references, was soon dissipated, when we came to the rules for predicting the weather. Here the truly philosophical method of forming artificial rainbows '*by spouting water out of the mouth ;*' and the elegant verses, in which

'A rainbow at night,
Is the sailor's delight ;

A rainbow in the morning,
Is the sailor's warning :—

And again—

' A mack'rell sky, and mare's tails,
Make lofty ships carry low sails ;'

reminded us of our old acquaintance, the good Shepherd of Banbury ; and restored us to perfect good humour, which continued till we had finished the fifth book.

We should now say a few words on the subject of the sixth book, ' containing the Tables, with an explanation prefixed ;' but, luckily for us reviewers, who are soon tired of poring over what the printers call *table work*, although it comprises no less than fifty-three tables, which occupy 216 pages, the *same* tables fill an equal number of pages in an additional *seventh* book, or *second* volume, or *new* book (we know not how to call it), which now waits our examination under the title of '*A Collection of Mathematical Tables.*'

That our readers in the ' universities and academies,' together with ' the navigator, geographer, surveyor, and man of business,' may be aware what a delicious treat our author has prepared, we beg to present them with a bill of fare. The tables, which are in number ninety-three, relate to these particulars :—' Latitudes and Longitudes of Places—Moon's Age—Epacts of Years—Epacts of Months—Corrections to time of High-Water—Equation of Time of High-Water—Miles, &c. in a Degree of Longitude, at each Degree of Latitude—Logarithms to 5 Places—Logarithmic Sines, Tangents, and Secants—Traverse Tables—Meridional Parts—Dominical Letter—To find the Day of the Week, and conversely—Refraction in Altitude—Sun's Parallax in Altitude—Correction of do.—Depression of the Horizon—Dip of the Sea—Semi-diameter of the Sun—Augmentation of Moon's Semi-diameter—Sun's Declination—Change of do. for Periods of Four Years—Reduction of do. to any given Meridian and Time—Right Ascensions and Declinations of principal Fixed Stars—Right Ascension of the Sun—Equation of Time—Reduction of Moon's Passage over different Meridians—Error of Observation arising from an Inclination of the Axis of the Telescope to the Plane of the Sextant—Correction of the Moon in Altitude—Acceleration of the Fixed Stars—Natural Sines—Half Elapsed Time—Middle Time—Rising—Correction of Computed Latitude, three tables—Proportional Logarithms—Final Effect of Parallax on the Distance between the Moon and Sun—Amplitudes of a Celestial Body—Rising and Setting of do.—Transit of Pole Star—Difference of Altitude of Pole Star and Pole—Distance of Objects at Sea—Degrees reduced to Time, and conversely—Difference between Meridian Altitude of Object, and Altitude one Minute before or after the Transit

—Extension of preceding table—Reduction of Longitude, Declination, &c., of the Moon, to any given Meridian and Time—Equation of Second Difference—Altitude to be observed in order to ascertain the Apparent Time with the greatest Accuracy—Hyperbolic Logarithms—Reduction of do. to Common Logarithms—Lengths of Circular Arches—Reciprocals of Numbers—Square Roots from 1 to 1000—Cube Roots from 1 to 300—Nine Tables of Interest, Annuities, and Probabilities of Life—Reduction of English Chains to Feet—Scots Chains to Feet—English to Scots Acres—Scots to English Acres—Reduction of Distances from Inclined to Horizontal Planes—Angles corresponding to Chords—Reduction of Apparent to True Level—Platonic Bodies—Regular Polygons—Reduction of English to French Measure, and the converse—Principal Lines and Angles in Regular Fortresses—The Divisions of the Ninety-Six Arch of an Astronomical Quadrant reduced to Degrees—Climates—Distance between any two Days in a Year—Difference between the Old and New Style—Weights and Measures—Specific Gravities—Circumference and Area of a Circle, to a given Diameter—Diameter and Area of a Circle, Circumference given—Mean Diameters of Casks of the Four Varieties—Remarkable Eras and Events—Logistic Logarithms—Construction of Water Mills—Construction of Pumps—Length of Pendulum vibrating Seconds in Different Latitudes, with the Measure of a Degree of Latitude.' Such of our readers as have patience to wade through this tedious catalogue, will see that there must be a very injudicious attempt to throw together, in the same volume, numerous tables, which, though one part of them or another may be of use to persons of different occupations, cannot possibly, as a whole, be useful to any class of readers whatever. But what excites most dissatisfaction, is the attempt to circulate 216 pages, out of 260, of the same matter, and form, with the same errors, and *printed at the same time*, in two distinct publications. The tables subjoined to the Treatise on Navigation, carry evidence with them, independently of a comparison with the volume of tables, that they are incomplete: and the same may be said of the forty pages of explanation, which are only a part of the sixty-four pages that are prefixed to the separate volume. But, on a comparison of the two, their identity is still more obvious and striking; even the errata are the same; and, as if the author and publishers were proud of having it known that both books were printed at once, we have, in the errata of both, these directions: 'the binder will observe, that Sig. [D] of the Tables has been omitted—Sig. [E] must therefore immediately follow Sig. [C], being a continuation of Table VIII.' In addition to which, we ought to remark that the explanations of the tables, though bound up with both volumes, are rather superficial and deficient; though it must be acknowledged, the author endea-

vours to supply the deficiency with his accustomed ingenuity. *Ex. Gra.* 'See Longitude, vol. ii. p. 254.' 'For an account of the pendulum, its various properties, &c. the reader may consult that article, by the author of this, in the *Encyclopædia Britannica*.' The reference to the second volume of 'the Longitude,' led to another discovery equally favourable to the author; for on turning to that volume, we there found nearly twenty tables, which, with slight variations, are introduced into both the volumes now before us!!

After all this, we are further threatened with 'more scarce and valuable tables,' which it was the author's intention to have added here. How comfortable and consoling is the information with which this gentleman concludes his preface! 'These additional tables (says he) may probably appear in a distinct volume, to which this is to be considered as the first.' In return for the pleasure which we derive even from the probability of this elaborate work being continued, we would beg leave to advise, that, in case a judicious assortment from the 'Navigation,' the 'Tables,' and the 'Longitude,' should not furnish sufficient materials for an additional volume, the learned author would republish *Bettesworth's Ready Reckoner*, *Keay's and Hoppus's Measuring Tables*, and, if more should be wanted, try the success of a tabular commentary upon those famous summaries of knowledge, the pence, shillings, and multiplication tables. Then, indeed, may the doctor assure himself 'that he cannot bestow a more valuable present on the British islands.'

The examination of these volumes has really excited disgust and indignation, which we shall not affect to conceal. In times when the purchase of books of any kind is severely expensive, it is surely unpardonable to attempt, by all the apparatus of multiplied references, advertisement, and puffing, to tax the pockets of the public, and of our honest mariners particularly, with a triple purchase of tables, &c. a considerable portion of which they already possess under slight shades of difference, in the well-known works of Moore, Robertson, and the 'Requisite Tables' published by Dr. Maskelyne. We sincerely regret the necessity of passing so heavy a censure upon an author from whose talents and industry we had hoped for better things, whose former works we have perused with pleasure, whose abilities as a mathematician we cannot but respect, and of whose skill as a tutor we have heard honourable mention: we are, therefore, the more grieved to find that he has, to the manifest injury of his reputation, exhibited so reprehensible a specimen of book-making.

ART. XI.—*A Compendious View of Universal History, from the Year 1753 to the Treaty of Amiens in 1802. With Notes, to verify or elucidate the Passages to which they refer. By Charles Mayo, LL.B. &c. 4 Vols. 4to. 6l. 6s. Boards. Robinsons. 1804.*

WE have already briefly noticed this compilation in its earlier state; but it has now swelled to a bulk, and, we may add, an importance, that demands a more minute examination. We must first observe, however, that the author has been unfortunate in his title; for he might as well have called it a *didactic poem*, or a *mathematical dictionary*, as a *compendious view of universal history*. History, if we understand its meaning aright, is a progressive narration of facts and events, arranged in a digested and concentrated form, and occasionally accompanied with appropriate and dignified observations. The *journalist* communicates to us events as they occur from day to day: the *annalist*, as they succeed each other by the year: the *chronologist*, as they occur within the range of certain periods of time, being at liberty to decide upon the extent of his periods without constraint or limitation: the *registrar*, as he has noted them down in their successive order in his account-book, but without either division of time, or division of subject: and the *memoirist*, as he finds them in his book of common-place, without topography, chronology, or connexion of any kind. Either of the characters may partake of one, two, or more of the rest; but we have given them simply and individually: and our readers will hence discover, how seldom it is that a compiler of historic facts adheres to the historiographic class of which he pretends to be a member.

In the work before us, there is no other plan than that of simple chronology—the chronologic period of the entire subject terminating with one volume, and being resumed and continued in the same manner through the rest. Hence all the unity and concentration of history, its most beautiful and characteristic features, are never to be discerned. During a most interesting stage of our own history, when every nerve is tremblingly alive, and the passions of hope and fear maintain an undulating equipoise in the balance, the curtain drops in the abruptest manner possible, and we are hurried to Holland, France, Spain, Portugal, Denmark, Sweden,

‘Nova Zembla, or the Lord knows where.’

without being allowed the fair, regular time of a modern mail-coach to stop at any post and regale ourselves with a hasty breakfast or dinner. At last, however, by great good luck, but prodigiously out of breath, we enter Turkey; and, with our seven-league boots, cross over from Turkey to Persia, from Persia to the East Indies, and from the East Indies to China

and Japan. Here we console ourselves with the idea that we are fairly gotten to the *land's-end*, and that it is not possible for the spell of necromancy to carry us anywhere else. But we are still reckoning without our host; for, before our conductor has time to write *sixteen* lines, we are whisked away in a tornado to the West Indies, of which, nevertheless, we obtain nothing more than a glimpse, before we are carried back to Old England; and, after having thus circumnavigated the globe, resume the story at the very place at which we had dropt it, as though the whole had been nothing more than a dream. But an entire twelvemonth has now elapsed; we have travelled so far and so long, that we have forgotten the characters, the incidents, the connecting narration; we have to read the first pages over again; the tale loses half its interest upon a re-perusal; and we attend to its continuation under a manifest disadvantage.

In this manner proceeds the work before us from year to year; giving us a brief account of the annual transactions of every individual state and country that falls within its range (and there are few of either, of which no notice whatever is taken), and recommencing, like the index of a compass, at the northern point of Great Britain on the close of the annual revolution. To the title of *legitimate history*, therefore, this compilation has no more pretensions than an annual register, or a bundle of newspapers. To that of a *View* of Universal History it has still less pretensions; for the idea implied by this term is that of an open or elevated spot, from which we may perceive, at a single glance, the whole extent of the landscape before us: and still less can we denominate it a *compendious view*, for we have already *felt* that it extends to not less than *four* quarto volumes, although comprising, in the whole, a period of less than half a century.

In thus discussing the subject of the title, be it remembered, however, that we have not confined ourselves to the title alone. We have developed the author's plan, and the extent of his labours. It now remains for us to give some account of the merits of the book; and, having stated under what line of character it is unsuccessful, to point out its real desert and utility. It comprises, then, a vast body of floating facts chronologically compiled, important in themselves, and interesting as individual narrations. The sources from which they are drawn are generally authentic, and many of them not easy of access. For ourselves, we hesitate not to say that we shall often have recourse to it; not, however, for the purpose of perusing it as a history, but as an important and valuable book of reference, to which, from its arrangement, we can apply with ease; and on which, so far as we have compared it with its authorities, we may depend with no small degree of confidence. It is hence, therefore, rather cal-

culated for a library, than for a parlour-window: and few general politicians can do better than to be provided with it. But it is high time that the author should speak for himself.

'The period of history comprised in these volumes recommends itself strongly to our attention. The events and transactions of it are of the most interesting nature in themselves, independently of the concern we feel in cotemporary occurrences.—To trace the signal revolutions which have taken place in the course of it to their origin, to observe their effects, to form a judgment respecting the motives which have actuated those who have borne the most distinguished parts in them, and, by bringing the histories of different states successively under our view, to discover the relation that subsists between them, and by what springs the several governments have been moved in their conduct towards each other, is one of the most pleasing and satisfactory employments of the mind.—The design of this work is to facilitate such researches.

'In the earlier ages, nearly all that is interesting in the civil history of the world is comprised in that of some one predominant empire. But since that wonderful revolution, when the declining Roman empire was overrun and broken in pieces by the irruption of the barbarous northern nations, an *entire new* system of things has taken place. The civilized part of the world has been divided into a number of independent states, which have at different periods rivalled each other in greatness; each, in its turn, having borne the sway, as it has been favoured by the character of its sovereign and other advantageous circumstances.—Moreover, as commerce has been gradually extended and has become a more important object, it has associated itself more intimately with civil policy. New interests have arisen from it. It has given occasion to combinations among some, and has been the cause of jealousy, enmity, and war among others: and thus the sphere of history has been enlarged and rendered more complicated.

'Correspondently with this system of things, the writer has given a history of each state; in which he has succinctly related every material event, measure of government, and transaction that has occurred; and has arranged them in such a manner as unitedly to form a *compendious view of universal history*.

'That the reader may have every possible satisfaction respecting the sources from which the substance of the several histories is drawn, references are given throughout to the volume and page of the works cited. He is thus enabled not only to appretiate every passage according to his opinion of the several authorities, but easily to detect the writer if he has written with a bias to any party, if he has not been faithful in the relation of facts, or has been guilty of plagiarism in servilely copying his originals.

'The partiality which men have for plans which are in any degree their own may have led him to think too favourably of that which he has here adopted, and has endeavoured to improve.—On the contrary, should its utility be evinced by the public approbation, he will have a pleasure in thinking that a work which has been a source of amusement and information to himself may contribute to that of others.

'The political events of this period, it must be acknowledged, are, in general, rather interesting than pleasing; they are better calculated to deter men from vice, injustice, and tyranny, by exposing the ill consequences attending them, than to allure them to virtue by displaying its charms. But a person who is disposed to apply history to its true use, to draw from it lessons of instruction for the regulation of his own conduct, will find in the occurrences of this period abundant matter of observation and reflection. He may here observe the fatal effects of an immoderate thirst of dominion. He will see weakness co-operating with artifice and villainy in the subversion of states; and popular rage finishing the work begun by intrigue and lawless ambition. The kindred fiends of tyranny and superstition are here seen endeavouring to hide their deformity by accommodating themselves to the genius of the age; yet still warring with the happiness of mankind, debasing the human mind and enfeebling all its faculties. Licentiousness may be observed disgracing the cause of liberty, and a restless spirit of innovation disturbing the world under the specious garb of philosophic improvement and political reform.' Vol. i. p. v.

The work, in its present state, as noticed in the title-page, extends to the treaty of Amiens, and, consequently, to the establishment of the supreme power of France in the person of Bonaparte, who, by an extraordinary combination of personal courage, stratagem, and good fortune, had at that time triumphed over every preceding faction. Neither the name of this singular man, however, nor any reference to him, occurs in the whole course of the preface; which, as is obvious from the passage before us, is rather accommodated to the earlier than to the latter volumes. The '*weakness co-operating with artifice and villainy in the subversion of states,*' refers, as we apprehend, to the timid and irresolute conduct of almost all the branches of the Bourbon family; and the '*popular rage,*' which finished 'the work begun by intrigue and lawless ambition,' cannot well descend much later than to the triumphant massacre of Robespierre. Nothing, however, can be more inapplicable to the period in which the volumes close, than the passage immediately antecedent; in which the reader is told that 'he may here observe the *fatal effects of an immoderate thirst of dominion.*' Now the treaty of Amiens is well known to have gratified, to its utmost glut, the most immoderate ambition ever exhibited by man; and, instead of delineating it as accompanied with fatal effects, has established its complete triumph over justice, morality, and religion, fundamental political connexions, and the general balance of power. On the completion and republication of this work, its preface should, therefore, have been revised: as it is, the preface to Johnson's Dictionary might have answered almost as well.

Of the four volumes of which the work consists, the first carries us from the peace which followed the treaty of Aix-la-

Chapelle, or, to speak more strictly, from the year 1733 to 1769 inclusively; the second, from 1770 to 1785, the period of the termination of the American war; the third, from 1786 to 1796, at which time the stadtholder fled from Holland; and the fourth, to 1802, in which was established the short-lived treaty of Amiens. The chronologic narration closes in the middle of the fourth volume; the remainder of which is devoted to miscellaneous papers relating to every state and nation, and which were either omitted, or could not conveniently be introduced into the body of the work. Of these papers many are truly valuable and important.

As a specimen of our author's manner, we shall select the following account of the inglorious and final triumph of the triumvirate of northern powers over Poland; which we purposely copy, because it is occasionally necessary, during the strange æra in which we live, to refresh our own minds, and the mind of Europe at large, with the recollection that it is possible for the cause of liberty to be the cause of monarchy; to be uncontaminated with anarchy and self-interest, and to be prized, even on account of its own intrinsic value, above that of property, or life itself. Would to God we could add, that it is also possible for us to show, in our own day, that it is in every instance as successful as it deserves to be.

‘ The definitive treaty of peace being signed, Catharine devoted her chief attention to the affairs of Poland.

‘ Among the memorable events of this period none will excite more indignation in the breasts of the humane and generous than the unhappy state of the Poles, whom we have seen emerging by their own efforts from a state of anarchy, civil disorder, and oppression; whose bravery and patriotism may serve as a pattern to the most enlightened nations, and whose only characteristic vice was that turbulence which was the offspring of the feudal system, and which their new constitution had a tendency to correct.—It was most unfortunate for the patriots of this country that the merits of their conduct became a subject of general discussion at a time when liberty itself was discredited by the abuse of it in France; when the fears of some and the artifice of others had confounded the exercise of it with licentiousness, and when reform and improvement were branded as innovation.—The French democrats had destroyed the established religion and government—they had abolished the order of nobles—they were undermining the foundations of social order—they had already reduced their sovereign to a state of abject dependence on the will of a tyrannical faction, and were preparing to complete their work by the entire abolition of royalty.—The Poles, on the contrary, had confirmed the church establishment; making it, at the same time, consistent with the freedom of religious opinion.—They had confirmed the order of nobles—they had declared the crown hereditary, as an expedient for avoiding that anarchy into which the Jacobins were endeavouring to precipitate the French nation—and

they had adopted the wisest measures for the preservation of social order. And yet the emigrant princes and their allies, breathing equal violence against whatever did not favour the re-establishment of absolute authority, and their own restoration to power and wealth, represented the patriotic Poles as partisans of infidelity and the new doctrine of equality.—With the advantage of these impressions on the public mind, Catharine prepared to execute her schemes of ambition, and, under these, Frederic William sought a cover for his reproachful perfidy.

‘The line of conduct which the empress meant to pursue was signified in a declaration made by her ambassador, Bulgakow; in which, under pretence of regard for the Polish nation, she made known her determination to support the partisans of the ancient constitution; a system the continuance of which was certainly most agreeable with the empress’s policy, on account of its tendency to perpetuate disunion and weakness among the Poles.

‘When the Russian armies were penetrating into Poland, to co-operate with the forces to be raised by counts Potocki, Rzewuski, Branicki, and other opponents of the new constitution, the patriots prepared for defence with that zeal which had distinguished their former proceedings. They, at the same time, applied to the king of Prussia for the aid which he had engaged by treaty, in 1790, to give them; and received an answer that convinced them of his change of policy towards them. That prince, who, in his letter to count Goltz, had declared his inclination to assist the Poles “in consolidating their new constitution,” was not ashamed to tell them, “that on viewing, with a calm eye, the new constitution which the republic had adopted *without his knowledge and without his concurrence*, he never meant to support or protect it.”—The reason which Frederic William gave for this dereliction of engagements must be considered rather as a wretched subterfuge than a plea.—“That the constitution of May the third 1791 being subsequent to their treaty of 1790, the king of Prussia was not obliged to fulfil the conditions of it.”

‘The conduct of this monarch, whilst it excited indignation in every man of integrity, and grief in all who had a regard for the character of princes and the stability of thrones, needed no comment with those who were well acquainted with his political views.—He had ever been desirous of weakening the empress’s influence in Poland, and gaining possession of Dantzic and Thorn. He had entertained hopes of effecting these purposes by supporting the Polish patriots against her partisans during the war between Russia and the Porte. But having no further hopes of success on these grounds, when Catharine’s treaty of peace with the Porte enabled her to send a strong army into Poland, dreading at the same time the progress of free principles, and deeming his support of the patriotic Poles incompatible with his enterprise against France, he thought it politic to abandon a nation whose alliance he had no further occasion for, and to make his favourite acquisition the price of a coalition with the empress.

‘It is a relief to turn our attention from these acts of perfidy to the operations of war; where a contemplation of scenes of bloodshed, however painful in itself, is, in some degree, compensated by

the display of manly virtues.—The patriotic army, commanded by prince Poniatowski, was far inferior in force to the Russians, who were advancing towards Warsaw : nor had they any thing to balance the want of numbers and discipline but the heroic ardour which the consciousness of a just cause, and their national enmity to the Russians, inspired.—After several conflicts between detachments, in which the Poles displayed their bravery without gaining any advantage of their enemy, the two armies approached each other near Zielmc. This brought on a pitched battle, in which, after they had been ten hours warmly engaged, victory at last declared for the patriots ; the Russians leaving 4000 men dead on the field.

‘ Had the Polish king been animated with the same patriotic fire that glowed in the breasts of his countrymen, had he led his troops in person to the field where their future existence as an independent nation was to be decided, their fate might possibly have been averted. On the contrary, when Stanislaus saw himself abandoned by the Prussian monarch, and ready to be overwhelmed by the armies of Russia, and, amidst all the adventurous spirits of this age, could find not one ally to preserve the balance of power among the European states, by saving a free monarchy from the destruction meditated by a princess who was tyrannizing over the powers of the north, he began to discover a want of that firmness which his present circumstances required.—Deceived by Catharine’s friendly professions, he mispent the precious moments in the fruitless negotiations which he suffered himself to be drawn into, which should have been employed in active hostilities while the natural ardour of his troops was heightened by victory.—The Russians, mean-time, became daily more formidable, as their reinforcements arrived from different quarters, and they approached nearer the capital.—Contemplating the vast power of his enemy, and then reflecting on his own deplorable situation, without adequate resources, without allies, and opposed by a strong party in his own kingdom, Stanislaus made too small account of the advantage which he would have derived from the zeal and bravery of his forces, animated by their sovereign’s presence and exhortations. He appears to have been intimidated by the empress’s menaces, or to have been impressed with too faint a sense of the glory which awaited him, should he fall a victim in so meritorious a cause.—On receiving a letter from Catharine, in which she declared “ that she would not forgive him for having deceived her hopes, unless he joined the confederates of Targowitz, who came at the head of the Russians to overturn the constitution of the third of May, and restore that of which she had been the guarantee,” he called a meeting of the deputies of the different provinces, to deliberate on the measures to be adopted ; wherein it was determined, under pretence of an armistice, to lay down their arms.

‘ Yet it was not all the Polish nobles who thus acquiesced in the surrender of their country’s rights and independency. Count Malachowski, and the princes Radzivil and Sapieha, who had repeatedly done honour to themselves by their patriotism, now placed their names at the head of a protest against these proceedings of the confederates at Targowitz, and received the heartfelt applauses of their countrymen as their reward.—Considering, however, how much the

patriotic cause was at present weakened by division and by the fear in which men stood of the Russian armies, they thought it expedient to repress their feelings, and bear the injuries done them with silent indignation, till the circumstances of the neighbouring states should be more propitious to them, or a deeper and more general sense of their wrongs should rouse the whole Polish nation to renew their efforts for reclaiming their liberties.' Vol. iii. p. 316.

The passage we have thus selected is the whole that is given us for the extant year under the title of *Russia, Poland, and Prussia*. With this termination the history suddenly breaks off; and we are obliged to hunt for a resumption of the track through a forest of nearly fourscore pages; when we, at length, once more catch a glimpse of it, but only again to lose it in the same abrupt manner: after which it a third time fleets before us, and in a form from which we shall extract another passage that may be regarded as a continuation; thus pursuing the synthetic, while the author himself is exhibiting the analytic, method of recording events.

'These evident indications of Catharine's intention to tyrannize, instead of subduing, served only to rouse the spirit of liberty. When the patriot chiefs saw that their countrymen were incensed at the insults and maraudings of those Russian troops which were brought into Poland to be the instruments of oppression, they once more determined to erect the standard of revolt.—The patriots had fought with great disadvantage in the late war from the want of an able commander: but such an one was now found in the brave Kosciusko.

'This remarkable personage was by birth a Polish nobleman of small fortune. He was bred to the profession of arms at a military academy at Versailles: after serving in the Polish army, he went, an adventurer, to America, and gained repute under the standard of Washington during the civil war in that country.—Kosciusko would have shone with distinguished lustre in the ages of chivalry; having all the virtues and endowments of an hero, with an enthusiastic fondness for liberty, in its most genuine sense. Gallant, generous, intrepid, and strictly just, he commanded obedience by the respect in which he was held; he attached the troops to his person by his popular deportment and courteous manners; he taught them discipline, patience of fatigue, and contempt of danger, by his own example; and inspired them with confidence by his own composure of mind, and dauntless fortitude.—Such was the man whom the patriots now chose for their commander in chief.

'Repairing to Cracow, he was there received by the Polish nobility, and was formally invested by them with the commission of general. And when he had issued a proclamation, exhorting the Poles to fly to his standard, in order to break the chains of slavery, he there, in common with the troops who gave him their support, took a solemn oath to deliver their country or perish in the attempt.—They, moreover, swore that they would defend the constitution of 1791; they instituted a revolutionary government for the preserva-

tion of good order ; and took especial means to prevent any wrong from being done to the subjects of the emperor.

‘ Warsaw was now destined to be the chief scene of war.—On intelligence that the Russian ambassador had demanded that the arsenal should be surrendered to him, Kosciusko, whose standard had been joined by some regiments which had been in the empress’s service, marched towards that city, with his small army composed of regular troops and peasants armed with scythes and pikes, and defeated a Russian army of far superior force on his route.—The fame of this victory, which flew through the provinces, soon brought Kosciusko an accession of strength : and he proceeded, in consequence of it, to make arrangements with the subordinate commanders for the defence of different quarters of the kingdom.

‘ In the mean time the commotions at the capital increased : and the king, by his want of firmness in resisting the insolent demands of the Russian ambassador and other circumstances in his conduct, created such suspicion of his lukewarmness in the patriotic cause and his intention to escape from Warsaw, as lost him the esteem and confidence of the patriots, and induced them to keep such a watchful eye over him as reduced him to the situation of a prisoner of state.—When d’Ingelstorhm still insisted on the surrender of the arsenal, the enraged citizens flew to arms in support of the garrison, and attacked the empress’s troops then in the city. A furious battle ensued in the streets ; which ended, after it had continued eighteen hours, in the expulsion of the few Russians who remained unslaughtered.

‘ The war at this period was rendered more interesting by the arrival of the Prussian monarch with an army in Poland. He had deserted the confederacy against France, in which he had engaged with so much zeal and had invited other states to unite with him ; preferring the advantage arising from the plunder of this unhappy kingdom to the honour of a strict observance of public faith.—The Poles, being destitute of allies, had accepted pecuniary aid from the revolutionary chiefs in France : and this, enabling Frederic William to throw on them the reproach of democratic principles, furnished him with a pretext for war with them ; for a confederacy with that tyrannizing power against which he had promised them his protection, for the purpose of despoiling them of their remaining dominions.

‘ Kosciusko, mean-while, was arrived at Warsaw : and, by one of those extraordinary revolutions which distinguish this period of history, that chieftain was effectually invested with the supreme authority, acting through the medium of a national council established under his auspices ; whilst the benevolent Stanislaus remained a pageant in the hands of the patriots, and gave his sanction to acts of state in the passing of which he had no influence.

‘ As a sort of homage to public opinion, each contending party vindicated its motives of action : the confederate powers endeavoured to impress the world with a persuasion that the Poles professed the same pestilential principles, and had the same subversive views with the French revolutionary leaders, and that all established governments were interested in opposing them : the Polish patriots, on the

contrary, vindicated themselves by solemnly declaring that they had no object in view but the recovery of their dismembered provinces, and the establishment of the constitution of 1791, by which monarchy, far from being destroyed in this country, would be placed on a firm foundation.

After some trivial successes, Frederic William advanced, with an army of 40,000 men, towards Warsaw; and encountering Kosciusko, who marched against him with only 12,000 men, ill provided with arms, he defeated him, after a severe engagement, and obliged him to retire within an intrenched camp which covered Warsaw.—The Prussians, having, by this victory, checked the ardour of the new-raised patriot army, gained possession of Cracow: and, returning to Warsaw, they united with the Russians in investing that city.

Every artifice was now practised to seduce the Poles from the glorious cause in which they were engaged. Frederic William offered the citizens his protection, if they would merit it by submission: but they declared that they would share the fate of the army. He held out the lure of rank in his army to the Polish officers: but they rejected his offers with disdain; declaring that they would live or die with Kosciusko.

The Polish camp intervening between Warsaw and the Prussian army, as the only mean to take the city, a furious assault was made on their intrenchments, whilst a heavy bombardment was carried on. The assailants were repulsed with prodigious slaughter; and the prince royal of Prussia was in imminent danger. Yet the Prussians came again to the attack, and gained several of the Polish redoubts, when an alarming insurrection in south Prussia made a diversion in favour of the patriots, and answered every purpose that their warmest friends could desire. Frederic William, who wanted firmness and perseverance in warlike enterprises, fearing that this might be fatal to his interests in his newly acquired and much valued dominion, instantly raised the siege and marched to the relief of his forces in that quarter. In fact he had reason to entertain such apprehensions: for Madelinski had already captured Bomberg; and threatened, by his activity, to regain all the dismembered territories of the republic.

This event, assisted by the popularity which the patriots derived from the emancipation of those peasants who had been in a state of villanage, would probably have proved decisive in their favour, had not the war been supported by a more vigorous enemy than the Prussian monarch.

We may form an idea of the critical circumstances of the patriots, and their prospect of success, by observing the comparative force of the contending parties.—In the south, general Zayontchik, with 8000 men, watched the movements of the Austrians, who were daily expected to take part with the Russians.—Syrakowsky, with only 8000 men, was opposed to Suworow, who was advancing with a strong army towards the centre of the kingdom.—And Jasinsky had only 6000 men to guard Lithuania against an army under Fersen, which Suworow had detached to gain possession of that duchy.

Kosciusko, fearing that Jasinsky would be overpowered by Fersen, and knowing that inevitable destruction awaited him

should that general be joined by Suworow, left Dombrowski with 4000 men to defend Great Poland against the Prussians, and marched, with 18,000 men, into Lithuania.

‘ These movements brought the war to an issue.—When Kosciusko was marching against Fersen, before he should have formed a junction with Suworow, that general anticipated his design, and advanced to give him battle. But enthusiastic valour was here robbed of its reward by treachery. General Poninsky, who was posted with a body of troops to guard the passage of the Vistula, suffered the enemy to pass, and disobeyed his general's orders to rejoin the army. Kosciusko's troops, however, fought with signal bravery, and repulsed the Russians in two attacks.—The advantage was evidently on the side of the Poles. But, to render their victory complete, they abandoned their strong position, which alone could enable them to support themselves against a far superior force, and attacked the Russians. The battle then was renewed with redoubled fury. At length, the Russians succeeded in throwing their enemy into confusion: general disorder ensued: the desperate valour of the Polish troops was in vain opposed to the superior strength and discipline of the Russians: The route became complete. Kosciusko, who had been in the thickest of the battle, had three horses killed under him, and had been severely wounded with a lance, was, at last, brought to the ground by the stroke of a sabre.—In vain did this brave man implore the death which a Cossack was about to inflict on him, as preferable to captivity, embittered by a knowledge of his country's disgrace: he was carried prisoner to Petersburg, and committed to a dungeon from which he was not liberated till the accession of the emperor Paul.

‘ Though distressed by these disasters, the Poles adhered to the counsels of their captive chief, by persevering in the glorious cause for which they had erected their standard, under the auspices of the national council; which, by a fresh proclamation, reminded them of their motto, *Liberty or death*, and exhorted them to a firm adherence to this alternative. And Stanislaus himself, with a resoluteness which was not always seen to be blended with the mild virtues that marked his character, treated with merited disdain an insolent application from general Fersen, and declared that even their late defeat and the loss of their valuable general would not shake their resolution to maintain the cause of liberty to the last extremity.

‘ Notwithstanding the patriots did honour to themselves by this resolute behaviour during their declining fortunes, yet they were continually weakened by defeat, and the contest now hastened to a conclusion.—Suworow, who had obtained a complete victory over a division of the patriot army at Brzesc, in Great Poland, a few days before Kosciusko's defeat, being freed from any force which merited his regard on the side of Lithuania, advanced with the grand army to the neighbourhood of Warsaw, and was there joined by the armies which had acted separately under generals Fersen, Durnfeld, and Denisow.

‘ Their forces being assembled, it was determined to attack the suburb of Prague, where the chief army of the patriots was in garrison. This suburb, which is separated from Warsaw by a bridge

over the Vistula, was guarded by a double intrenchment; the garrison amounted to above 10,000 men, and their forts and batteries were mounted with above 100 pieces of artillery.—The Russians, formed into seven columns, stormed the Polish intrenchments by night, sabre in hand; and, climbing the enemy's lines, they made their assaults in the different quarters so unexpectedly, and with such impetuosity, that the garrison were driven from their redoubts behind their inner intrenchments.—The Poles fought with the furiousness which rage inspired, till absolutely borne down by numbers. Attempting a retreat by the bridge, they were there intercepted. The general's orders being, to give no quarter, a carnage ensued, which was not interrupted till 5000 men were slain or drowned in the Vistula, and the remainder of the garrison were taken prisoners.—Let the reader image to himself the mournful consternation which prevailed in the city of Warsaw, when returning day presented to the citizens these dreadful scenes of bloodshed. And then let him, if possible, stretch his imagination still further, and conceive what their feelings must have been when, after an intermission for the sake of pillage, the work of slaughter was resumed: when the suburbs were fired; and their ears were pierced with the dying shrieks of men, women, and children, several thousands of whom fell victims to the ferocious barbarity of the Russians, sharpened by the remembrance of the sufferings of their fellow-soldiers at Warsaw in the beginning of the campaign.—It is painful to relate actions which reflect disgrace on human nature: but truth demands that they be not repressed: and may the God of mercy grant that the abhorrence excited towards the inhuman perpetrators, and the odium which they brought on the arch-murderer, by whose orders they were sanctioned, and those who were accessory to his guilt, may serve as a lesson to future ages, and deter men from the repetition of such detestable crimes.' Vol. iii. p. 439.

As the Hans Towns may soon become an object of curiosity, if not of importance, we shall select, from the appendix, our author's account of them.

'Although this confederacy has long since lost the power which it once enjoyed, and many of the towns which formed it are gone to decay, yet its former greatness may, perhaps, render some account of it satisfactory to such as are interested in commercial history; and the connexion it had with Germany recommends its introduction in this place.

'According to Anderson, the word *hans* * means a society or corporation united for their joint benefit.—The precise era of the confederation does not appear to be known. Werdenhagen, who wrote their history, supposes it to have been in the year 1169; and that the league first consisted of the following towns, on the Baltic: Lubec, Wismar, Rostock, Stralsund, Gripeswald, Anclam, Stetin, Colberg, Stolpe, Dantzic, Elbing, and Koninsberg.—The particular object of the confederation was to protect the confederates from such

* He cites Lambecius, librarian to the emperor Leopold.—Werdenhagen makes the word a corruption of *an-der-see*, near the sea, alluding to the confederacy's first consisting of maritime towns.'

ravages as some cities had experienced from the Danes, and from the depredations of the pirates who infested the European seas.

‘ One of the first rules of the confederacy was, that no city should be admitted into it, but such as were either situated on the sea, or on some navigable river, commodious for maritime commerce.—Another rule was, not to admit any cities which did not keep the keys of their own gates and exercise civil jurisdiction within themselves; yet it was admitted, that, in other respects, they might acknowledge some superior lord or sovereign.

‘ Some years after the formation of their league, in the beginning of the thirteenth century, they chose for their protector the grand master of the German knights of the cross and his fraternity, who had, in 1212, made themselves master of Livonia and erected their government there.—Thus they laid the foundation of their future greatness by securing the trade of all the south-eastern side of the Baltic and the countries with which the Vistula and other rivers gave them a communication.—The members of the league held an extraordinary assembly every ten years, at which they solemnly renewed their union, admitted new members, and excluded old ones, if refractory, and transacted other matters relating to their general interests.

‘ The whole confederacy was divided into four classes, over each of which a certain city presided.—At the head of the first, and of the whole confederacy, was Lubec; where their records were kept and their general assemblies were usually held. It presided over the Vandalic and Pomeranian towns.—Cologne was the head of the second class, and presided over the countries near the Rhine.—Brunswick was the head of the third; and presided over the cities of Saxony.—And Dantzic was the head of the fourth; and presided over the towns of Prussia and Livonia.

‘ Such had been the progress of the confederacy in the course of a little more than a century, that in 1370, which Werdenhagen fixes as the epoch of their greatest prosperity, that it then consisted of sixty-four of the principal cities and mercantile towns in Germany and the countries bordering on the Baltic and German seas: and their annual contributions for their ordinary expences were 2,069 dollars.

‘ Beside these sixty-four cities, &c. their historian gives a list of forty-four more which were only allies of the confederacy. Among these were the principal maritime places in England, France, Spain, Portugal, Italy, Holland, Sweden, and Russia.

‘ Beside the cities which presided over the several divisions of the confederacy, there were four others, where they had their four principal houses, called *comptoirs*, or *compting-houses*.—The first of these was Bruges.—The next was London; “where they likewise had a stately and spacious college, called in Latin *guildhalda Teutonico-rum*, and commonly named the Steel-yard.”—The third was Novogrod in Russia.—And the fourth was Bergen in Norway.

‘ This league, in the zenith of its grandeur, gave laws to all the commercial world; and are said to have exercised their power, in some instances, oppressively towards those who were not of their confederacy.

‘ The commencement of their decline may be dated from the year 1361, when Gothard Ketler, grand master of their protecting knights, resigned the part of Livonia which remained to his order to the

crown of Poland, and received the sovereignty of Courland in compensation for it.

‘ Various causes afterwards contributed to their decline. Among these was the opposition which they experienced from some of the principal maritime powers of Europe, who thought that this confederacy interfered with the trade of their subjects. In the reign of Elizabeth, there were frequent contests between them and the government on account of the rivalry between them and the English merchants.—The flourishing state of the Dutch trade was another cause of their decline.—Moreover, as their own shipping decreased and that of the several maritime powers was strengthened, they lost much of that weight which they had derived from the naval aid afforded by them to different states in time of war.—In the beginning of the seventeenth century their commerce and power were much diminished : and after that period we hear little of their weight in Europe.’ Vol. iv. p. 375.

This *compendious view* is by no means satisfactory : we have no account whatever of Hamburg, Bremen, Brunswick, Magdeburg, and several other cities ; and nothing can be more incorrect or circuitous, than the etymology of the name itself. *Hans* is a German word, signifying lord, or seignor : whence the Hans-Towns, or, as the Germans denominate them, *Hanse-städte*, are illustrious, lordly, or seignorial cities.

A part of the appendix consists of royal genealogies : in that of Russia we perceive no notice taken of the assumption of the imperial title, or the commotion it produced at Vienna. We are told, moreover, that, on the death of Paul, his son succeeded him *by the name of Alexander, as though he had assumed this name on the occasion of his accession.*

ART. XII.—*Gems, selected from the Antique, with Illustrations.*
Part I. 4to. 15s. Boards. Murray. 1804.

IT is obvious to every one acquainted with the fine arts of antiquity, that sculptured gems are the most precious of their remains. To these may be applied what hath been said of the author of nature,—*certe MAXIMUS in MINIMIS!* The term *gemma* among the Latins (*Pocchio della vite* of the Italians, or the eye of a vine) referred to the knot or articulation, whence nutriment is, as it were *umbilically*, imparted from the plant to the germ, and may be illustrated from Tully:—*Itaque ineunte vere in his, quæ relictæ sunt, existit tanquam ad articulos sarmentorum ea, quæ GEMMA dicitur, a quo oriens uva sese ostendit.*

This part, as being the source of a gelatinous and pellucid juice, suggested the metaphorical appellative of *gemma*, to all such stones as are of similar appearance. Thus, while Ovid employs the term in its original sense:—

‘ Quoquo loco est vitis, de palmite *gemma* movetur—’

Virgil uses it in its figurative acceptation—

‘ — tereti subnectit fibula *gemmâ*— ’

and, in allusion to the ancient crown which was formed of a wreathed branch, in a sense congenial to both—

‘ Regalesque accensa comas, accensa coronam
Insignem *gemmis*. ’

But, without entering into the natural history of such stones, let us resume the subject to which artists have applied them. It being the intention of the work before us to render the general reader familiar with the fine arts, and thence disseminate a love of them, ‘ An humble individual,’ as the ingenious artist is styled, to which this publication owes its origin, ‘ has at once, with the timidity of modesty, and the resolution of enterprise, attempted to fill a department which, in our country, has been rarely occupied.

‘ The private collections that have been engraved are costly and scarce ; to none are illustrations subjoined ; and the public have, as yet, only the works of foreigners on these subjects. The gentlemen who have cheerfully assisted the well-meant endeavours of the artist, have tasked their own industry, in collecting literary materials, which, it is presumed, contain some information, and greater entertainment on many curious topics. The selection, drawing, and engraving, have proved an arduous undertaking, and claim indulgence for the imperfections which necessarily attend most works of art, and particularly those which require the fostering warmth of public encouragement. But on a comparison with what has hitherto been given, the artist is not without a hope to realise those fruits of public favour, of which, in the reception of his early numbers, he has gathered the blossoms.’ Advertisement.

The advertisement is followed by an Introduction to the Study of engraved Gems, and abounds with a variety of ingenious observations, pertinent to the subject, and illustrative both of the history and the uses of the art.

In his selection of the gems themselves, Mr. Dagley has made choice of such subjects as, amongst the vast remains of antiquity, appeared most interesting from their designs or execution ; but whether any other person would have fixed precisely on the same, may be questioned. There is not one, however, chosen by him, that is not intitled to praise. That all are equally well drawn or engraved *, we will not venture to pronounce ; but as many of the subjects are here for the first time given, and the attempt is in many respects novel, we receive it as an earnest of more extended success.

* We recommend it to Mr. Dagley, in a future number (for the part before us is divided into numbers, and consists of three) to draw and engrave anew the JUPITER and TITANS.

After pointing out the ACRATUS, which is of singular beauty, we will subjoin the description for a specimen of the work.

‘ We have engraven this gem from a sulphur cast in the collection of baron Stosch. It is not less remarkable for beauty, than for the rarity of its subject.

‘ It has sometimes been confounded with the bust of Cupid—but it is undoubtedly a winged Bacchus, called Acratus, or the genius of pure wine, one of the most favourite companions of Bacchus. It is deeply engraven on an *amethyst*, in *Dactyliotheca Victoriorum*; the purple colour of the stone confirms its Bacchic character.

‘ Acratus is crowned with myrtle, ivy, and rose-buds, with wings on his shoulders, and his right arm wrapped in his dress. Pausanias, describing the representations of the gods which decorated the mansion of Polytion, dedicated in his time to Bacchus, mentions Acratus, an attendant genius on the god of wine, and describes his countenance projecting from the wall. He informs us, that the Amiclei adored Bacchus under the name of Psila, which in the Doric signified *wing*; *wine* (he adds) lightens and exalts the soul, as wings, birds. As wings are a known celestial emblem (observes the writer of the *Museum Worsleianum*, p. 69,) it is not incredible that the sculptor might have employed them to express the spirit which exalts the brain, and warms the heart, and fires the blood.

‘ Athenæus describes, in his first book, a repast taken in the morning, called *acratism*, consisting of bread dipped in the *acratos* or pure wine, from *ἀκρατος* (*acratos*) signifying without mixture, or pure wine. Among his quotations, book 2, we find a remarkable expression of Ion of Chios, who calls wine “an ungovernable child with a dark bull’s eye.” Does he not allude to such a personification of Bacchus as the one before us? the dark eye of the bull at once expressing the purple colour and sparkling fierceness of pure wine.

‘ The enveloped arm is typical of fidelity, as we have noticed in our description of Clio, page 5, and here is supposed to have been introduced to convey an idea of the god’s abhorrence of the vile adulteration of his beloved juice, and of the secrecy required in the confidential intercourse of Bacchic festivity.

‘ That the Acratus was a kind of attendant genius on Bacchus, appears by a fact related of Nero, so notorious for the wickedness and absurdity of his frolics. He had the folly of assuming the divine character of Bacchus, or at least of publicly personating that deity with great pomp; which is likewise related of Alexander. It was on such an occasion that the Roman tyrant gave the name of Acratus to one of his manumised slaves.

‘ The figure of Acratus, in the Worsleian plate, appears to have suggested to Mr. Fuseli the idea of his Eros, in the representation of Eros and Dione, which decorates Dr. Darwin’s Temple of Nature; however, the subject is evidently copied from a fine gem of Cupid embracing Psyche. On a familiar acquaintance with the finest gems, we discover what a rich treasury of subjects they offer to the imitative arts, and with what freedom they have been employed by the greatest painters.

‘ We may observe on this joyous and fascinating head, all the

charm of ideal infant beauty, so rarely met with on antique gems. The light exhilaration of wine vivifies the smiling aspect and delicate countenance of the boy. The inclination to laugh is the cheerfulness of a voluptuary; in his happy age, one may imagine he is experiencing the first sensations of voluptuousness, and his soul plunged in a soft reverie, between sleeping and waking, seeks to combine his fugitive images, and to realise the enchanting phantoms. The features of the god are all softness, but the joy which fills his soul does not entirely discover itself in his musing countenance. This

‘Et quocumque deus circum caput egit *honestum*.

Georgic. 2. v. 392.

amiable, but *subdued joy*, characterizes every face of Bacchus. We have observed, in our article of Apollo and Marsyas, that the ancient artists studiously avoided the convulsive extremes either of joy or grief. Spence, in his *Polymetis*, is justly offended with Dryden's translation of this line in Virgil. Dryden mentions the praise of the god in “jolly hymns,” and then translates the verse,

On whate'er side he turns his *honest face*.

Beautiful or *graceful* had been the appropriate epithet—but the truth is, that the hasty poet often sacrificed his taste to his rapid genius, and “seems to have borrowed his idea of Bacchus from the vulgar representation of him on our sign posts, and so calls it (in downright English) Bacchus's *honest face*!”

‘On the whole, the Acratus before us is finely executed; its tender joy accords with the elevation of the wings, which may be conceived as fluttering, and give the best finish imaginable to the composition.’
p. 44.

This censure of the term *honest*, adopted by Dryden, we cannot entirely accede to. The poet appears to have affected the use of it, not as a vulgarism, but a Latinism, and in the precise sense of *honestum*.

We learn from an address to the subscribers that it is intended to introduce in the second part of this work, besides the illustrations of the gems, a dictionary explanatory of the terms of the art, which at the same time will be extremely useful when considered as an introduction to the knowledge of painting, sculpture, &c. illustrated with poetical descriptions. Such a dictionary, well executed, is unquestionably much to be desired, and cannot but be well received.

We will take the liberty of recommending to the compiler to consult Sultzzer's admirable work on the theory of the fine arts, and also to avail himself of Visconti's little tract on those gems of antiquity which have upon them the names of the engravers.

We cannot close this article without lamenting that Mr. Merchant has never executed what we have been told he long ago had in contemplation; which was, to favour the public with his observations on the different ages and styles of the ancient artists. The observations of so able a rival must be singularly curious, as it would throw much light on the beauties of the art.

ART. XIII.—*Discourses on theological and literary Subjects. By the late Reverend Archibald Arthur, M. A. &c. With an Account of some Particulars in his Life and Character, by William Richardson, M. A. &c. 8vo. 8s. Boards. Longman and Rees. 1803.*

OF a life, whose smooth stream has glided along in what may strictly be termed a literary channel, unruffled by the cares of a family, and unchequered with either the vices or the honours of the great or the busy world, little can be expected to be advanced by the biographer which may stimulate or gratify the curiosity of the public at large. The important station filled by Addison, the diplomatic capacity exercised by Prior, the political and polemical character assumed by Swift, are circumstances that interest the feelings of the general reader. In such histories, he is stimulated by the factions of party and the intrigues of a court; but in the biography of the retired man of learning, in the life of him whose time was spent in improving his own mind, or expanding, by education, the mind of others, but a very small portion of matter will occur that can serve either to drag along the attention of the idle, or to satisfy the wishes of the impertinent. Nay, even to the man of reading and reflexion, to the living author himself, the history of every deceased sage does not afford material gratification. Unless where personal acquaintance had taken place with himself during the life of the party, or a striking similarity of situation leads him to the research, he will hardly bestow much time on the perusal of any memoir that does not display actions productive of general celebrity and importance. Professor Richardson seems fully aware of the truth of this remark; he therefore attempts not to outstep a very modest share of biography; he pretends to give such particulars only in the life and character of his friend as may gratify fit curiosity, and coincide, in some measure, with reasonable prepossession. To the few dignified spirits whom genius has placed in the foremost niches of Fame's proud temple, the eye of all is turned with eager reverence. We are solicitous to mark the progress of such transcendent abilities, and to fix, if possible, the moment when each sublime idea was produced in the mind of its author. We hear, with mingled astonishment and regret, that men like these had frequently to struggle with the ill of poverty—that the most insignificant prices were given by avarice to needy talents for works which will never die. With earnest haste we proceed in the narrative, that we may discover the fostering hand of power extended to lift them to such a degree of elevation that they might exert themselves without hindrance. With sorrowing anger we remark that no such help is near: Genius is left to work its own way, till its fame is established

beyond a doubt; and then the titled fool and golden ass are fair to become its patrons, that they may tack their insignificance to its immortality. These and other like circumstances will draw the attention of all men to the histories of authors of the highest rank; but the surviving friends of those of an inferior classification will not expect their manes to be so universally honoured: their virtues and their talents will claim respect as they become known; yet this knowledge will extend itself but slowly beyond their sphere of action whilst on earth.

The late professor of moral philosophy in the university of Glasgow was the son of Mr. Andrew Arthur, a considerable farmer of Renfrew. At eight years of age he was sent to school at Paisley, and, before fourteen, removed to Glasgow, where he was soon noticed as a lad of good parts, notwithstanding his excessive bashfulness and an awkward hesitation in his speech. During the time appointed by that university for attendance on theological studies, young Arthur employed his leisure hours as private tutor in the family of a Mr. Alexander; a situation which he seems to have retained till his licence to holy orders in the year 1767; shortly after which period, the university honoured him by the appointment of one of its chaplains. He became about this time the assistant of Dr. Craig, one of the ministers in Glasgow, and was chosen librarian to the university; an employment which imposed on him the only work that we hear of his having published—a Catalogue, in two folio volumes, of about twenty thousand books belonging to the college library. Only one occurrence more takes place to vary this tranquil philosophic life of Mr. Arthur, which is his election to the professor's office, in which he conducted himself so as to gain the utmost credit and respect to himself, and to afford very great advantage to the youth who attended him. His death happened on the 14th of June, 1797.

The discourses which Mr. Richardson has selected for publication from his friend's papers, are nineteen—five of them theological, and fourteen literary. In the former, Mr. Arthur attacks scepticism with great zeal and considerable success. Neither the celebrity of Mr. Hume's name, nor the acuteness of his reasoning, at all intimidates him, or prevents his attacking him particularly. His five discourses contain Arguments on the Existence of God—the Goodness of God—the Justice and moral Government of God—of Evils and their Causes, and the Systems respecting them. On subjects like these, it would be folly to expect much new matter; the world has heard them argued over for thousands of years.—On subjects like these, we cannot expect discovery; for 'who shall discover the things that pertain unto God?' It is enough if they be discussed with method and ingenuity; and of these qualities the following quotation is no unfavourable specimen.

* The second class of evils, which have been represented as inconsistent with the administration of a good God, are *natural evils*; or pain and distress in their various forms. It has been maintained, that if the Governor of the world were benevolent, there would be no uneasiness to be observed in any part of his works. Every creature he formed, would enjoy uninterrupted felicity. If we allow, that he had power to render every being happy, why has he not done it? Must we conclude, that he wanted inclination to render them happy? Does he delight in their misery? And did he form them to load them with pain? These questions were asked in the days of Epicurus, and they are still repeated by those who are unwilling to acknowledge the existence of a supreme mind.

‘ In answer to such questions, it may, first of all, be observed, that human abilities are too imperfect to investigate the sole end which the Deity had in view, when he created the world. It may have been nothing else but the desire of communicating happiness, for ought we know to the contrary; notwithstanding the instances of evil which occur. We are incompetent judges of the manner in which the greatest possible happiness may be communicated; and, perhaps, it may be impossible to communicate it, without an intermixture of evils affecting individuals. The sufferings of particular persons may be necessary, to produce the greatest sum of felicity upon the whole. There have been some, who have embraced this opinion, and maintained it; though it is evidently beyond the sphere of our knowledge. If benevolence mean nothing more than a desire of rendering every person happy, it is a blind indiscriminating principle, and must not be ascribed to the Deity, as the sole end of his actions; though the adversaries of religion choose to understand it in this light. If such indiscriminating benevolence had been the sole principle of action in the divine mind, there could not have been any evils in the world. Accordingly, it is not in this sense that we understand goodness, when we say, that it was the principle from which God acted. Mere benevolence in the Deity, would make no distinction between good and bad men; it would favour them equally, in order to make the sum of happiness the greatest possible upon the whole. But all who believe in the being of God, and seriously reflect upon his character, understand his goodness, as connected with justice, veracity, and fidelity. They consider God as exercising, not only a natural, but a moral government. In his natural government, he pays no attention to the characters of men. The light and rain of heaven descend equally upon the just and the unjust. All the revolutions of nature affect men indiscriminately. The good are not secured from danger, nor from the inclemency of the skies, any more than the bad. It is not in this part of the divine government, that justice and truth appear, because they are not proper objects for them; as inactive matter is incapable of being rewarded or punished, of receiving a promise, or acknowledging an obligation. Beings merely sentient, without the knowledge of right and wrong, and without any moral powers, are, in this respect, on the same footing with inanimate matter. They may enjoy pleasure, or suffer pain; but they must, indiscriminately, be liable to these sensations, and cannot be subjected to them as rewards and punish-

ments. It is in the moral administration of God, in that course of his dispensations in which he treats us as moral agents, deserving praise or blame for our conduct, that the justice and fidelity of God are manifest.

‘When we consider him as an upright governor, we perceive that he does not bestow happiness indiscriminately; but that he confers more ample shares of it, upon the righteous, than upon the wicked. We must necessarily consider him, when we view his character in this light, as not distributing happiness without distinction; but as exerting his moral attributes jointly, in the most perfect manner. In this respect, when we consider God as the moral governor of the world, as rewarding and punishing men for their conduct; it appears absolutely necessary, for the ends of his administration, that there should be some degree of pain and suffering in the world. If all enjoyed pleasure, and none were exposed to pain, there could be no evidences of a moral administration. Upon such a supposition, the consequences of virtue and vice would be precisely the same; and we could not conclude, that the ruler of all, had any particular regard for the one, more than for the other. The law of conscience, written in our hearts, might retain its power and obligation; but it would be entirely deprived of its external sanctions of reward and punishment. A natural government over inanimate matter, and merely sensitive beings, might, for ought we see, be administered without any pain or suffering. Every creature, capable of feeling, might enjoy as much pleasure as its nature admits of. But if there be a moral government established, the case is altered. There must be a distinction made between the righteous and the wicked. Some peculiar advantages must attend the situation of the one, of which the other is deprived. There must not only be enjoyment, arising from common and natural causes, equally conferred on all; but there must be enjoyments, that are solely appropriated to the virtuous, and that are conferred as rewards: and, on the other hand, there must be pain and suffering introduced, and some kinds of them introduced in such a manner, that they may not pass into the lot of all men; but may be either wholly, or for the most part, inflicted upon the vicious. In this light, pain and misery, when they are the consequences of vice, are so far from being arguments against the moral perfections of the divine nature, that they appear indispensably necessary in a moral administration; and without them, we could not have any means by which we could know that God is just, and that he rewards and punishes men according to their conduct.

‘We perceive something analogous to this mode of procedure, even in human governments.—A parent finds it necessary to punish his child for a fault, and a magistrate punishes a worthless citizen for a crime; not from any malicious view, but from a regard to good order, and the welfare of the domestic or civil communities, over which they preside. The Deity, in like manner, may be perfectly good, and yet may have allowed pain to be introduced into his works, in order to promote the purposes of the moral government which he exercises over men. If once it be admitted, that we are under a course of moral discipline, it may be easily shewn, that hardships and inconveniencies are so far from producing misery upon the whole,

that they are absolutely necessary to our happiness. A state of discipline and improvement requires, that individuals should suffer certain degrees of inconvenience and suffering. It is by means of these trials, that their virtue is strengthened and improved. By means of these, they find occasion for the exercise of their fortitude, patience, and magnanimity; and acquire those habits which constitute an eminent character. If there were no distress in the world, there could be no charity; if there were no dangers, there could be no courage; if there were no temptations, there could be no self-denial; if there were no calamities, there could be no patience. Natural evils are essentially requisite to a subordinate state of discipline and improvement, such as that in which we are at present placed. They are necessary for producing the highest good of which our natures are susceptible, the steady and unwearied practice of virtue; and of consequence, for procuring the delight that proceeds from it.'
P. 146.

The subjects of the literary discourses are:—On Qualities of Inanimate Objects, which excite agreeable Sensations—Concerning Mr. Burke's Theory of Beauty—Concerning Dr. Hutcheson's Theory of Beauty—Remarks upon the Sensations occasioned by grand and by terrible Objects—Concerning Novelty, considered as an Object of Taste—Remarks on some Objects of Taste, that seem not reducible to Beauty, Grandeur, or Novelty—Concerning the Influence of Custom upon our Judgements, in Matters of Taste—On the Arrangement of ancient and modern Languages—On the Causes that have promoted or retarded the Growth of the fine Arts—Concerning the Study of the ancient Languages, as a necessary Branch of a liberal Education—On the Importance of Natural Philosophy—On Sensibility—Concerning the Effects of critical Knowledge on the Advancement of the fine Arts—Observations on the Punishment of Crimes.

From the latter of these we shall give an extract to our readers. The plan of a police for the prevention of felonies has been adopted, under salutary restrictions, in this metropolis; but foreigners are not satisfied with its extent. The reasons why it cannot be further exercised in a free country are judiciously laid down; and in them the author shows himself to be a staunch friend to our excellent constitution.

'I have heard of two schemes that have been seriously proposed, with a view to prevent the frequency of crimes, especially of robberies, in this country.—The one of these is, to erect a board of police in the capital, resembling that which is established in France, under the inspection of a fit person, corresponding to the lieutenant of police in Paris, who, by means of spies and emissaries, and by means of information regularly transmitted to him from proper officers stationed in the country, may have a perfect acquaintance with the residence and transactions of all persons whose characters are suspicious. The other scheme is, to condemn all persons, guilty of robbery, or of

other gross crimes, to bondage and hard labour.—I am not satisfied that either of these proposals, if carried into execution, would answer the end intended by them; and I am thoroughly convinced, that neither of them is adapted to the constitution of Britain, and the temper of its inhabitants.

‘The first of these schemes, by which it is proposed to form a great establishment of police, comprehending many inferior departments, with their proper officers, is recommended by the success in preventing or speedily detecting crimes, with which similar plans have been attended on the continent, especially in France. We must not, however, allow this consideration alone to determine our judgement; for there may be regulations well adapted to the manners and government of other nations, that are inconsistent with our sentiments, and with the spirit of our constitution.

‘An obvious objection to this plan arises from the great expence with which the execution of it must necessarily be attended. It would require a vast number of spies of different ranks, connected with one another by their subordination to common superiors. We can hardly suppose that these spies could at all times possess a sufficient degree of intelligence for the purposes of the establishment, if they were less numerous than the officers of excise. As it might be necessary, however, that, in appearance at least, they should carry on some ordinary business, with a view to conceal their real employment, they might not entirely depend upon the public treasury for subsistence, and might therefore be supported for a smaller sum than the same number of excise officers. At the same time, when we reflect that secret services must be liberally paid for, and that it might be requisite to have spies who could easily obtain admission into fashionable circles, there is reason to believe, that the difference of expence upon the whole might not be very considerable. Though the excise be a very productive tax, the nation has always complained of the heavy charges paid for collecting it. If a burden, equally grievous, were laid upon a free people, without any pretence of defending their country, or of annoying their enemies, it would be altogether insupportable. The French, indeed, do not murmur; but the French do not tax themselves, and they claim no right to inquire into the expenditure of public money.

‘There is another objection to this proposal, of much more weight than that which I have already mentioned, arising from the nature of our civil constitution. A free people will never submit, for the sake of the most perfect security from the injurious attacks of individuals, to the restraint of acting always under the inspection of spies. They will not allow their houses to be examined by officers of police, without legal warrants from the magistrate; nor will they bear with patience to see their fellow-subjects carried away to prison, unless they know the grounds upon which they are suspected, and are also assured that they shall soon be brought to a fair and open trial. Men who love civil liberty, would rather choose that their goods and persons should be exposed to some small degree of danger, than purchase a complete security from such injuries, by suffering those who are in power to inspect every man’s business and conversation. An establishment of police, perfectly adapted to answer its

end, requires that cognizance should be taken of the suspicious as well as of the guilty, and is therefore inconsistent with liberty.

‘It is only in arbitrary governments, that such great and regular systems of police have been carried into execution; and there is reason to believe, that they are supported at great expence, and with unremitting attention—much more from reasons of state, than from any regard to the security of the subject, or the good order of the community. The end which they have in view, does not appear to be so much the punishment or the prevention of crimes, as the safety of the prince’s person, and the maintenance of his authority. A despot is at all times jealous and suspicious: he dreads every whisper as if it were the voice of a conspirator; and his throne shakes below him, whenever there is the smallest commotion among his subjects. Spies are necessary to bring him information of every thing that has the appearance of design or of exertion, that he may be enabled to preserve, through all his dominions, the stillness of night: but he endeavours to conceal his own fears, under the plausible pretence, that all his anxieties are produced by his unceasing attention to the safety and security of his subjects. The sovereign of a free state is agitated by no similar fears; for he reigns agreeably to the declared inclinations of his people; he possesses their confidence, and can depend upon their affections. As long as the sovereign of a free country is disposed to rule agreeably to the principles of the constitution, he will endeavour to be directed by the general wishes of his people; and whenever he begins to suppress the open declarations of their fears and disgusts, and to obtain secret and indirect information concerning their sentiments, he certainly means to increase his own power, and to lessen their influence: he distrusts them, because he knows that he himself deserves not to be trusted.’ P. 473.

Of the merit of these discourses we can speak in very respectful terms. Mr. Richardson’s partiality for his friend has certainly led him to over-rate their value, when he seems disposed to apply to the author the words of the Roman lyric—

‘Exegi monumentum ære perennius.’

So many books on every subject are already in the world, and such numbers of them written with so much care and skill, that hardly any thing short of a new subject, or surprising talents in the investigation of an old one, can confer immortality. Mr. Arthur, however, has a title to much praise. The young men who heard his lectures delivered, could not fail of improvement; and all young men who shall now read them, may derive a like advantage. There is one fault, that we cannot avoid noticing: the promiscuous use of the words *would* and *should* has a most cacophonous effect on the ears of an Englishman.

ART. XIV.—*The Shooting Directory.* By R. B. Thornhill,
Esq. 4to. 1l. 11s. 6d. Boards. Longman and Co.
1804.

THIS seems to be the day of jubilee for sporting instructors. Expensive numbers, by Mr. Reinagle, are now in monthly issue from the press; an entire work, on no less expensive a scale, by Mr. Daniel, has hardly passed through the hands of the binder, when Mr. Thornhill also addresses the world on the subject of field exercises. Yet the plan of this last gentleman is very different from that of the former writers, as he confines himself entirely to the diversion of shooting. It is true, indeed, that he steps beyond his bounds, when he gives a general introductory description of dogs; but we may pardon this fault, as the pages occupied in it are few. Had he offered any thing new on this head, we should not have esteemed the matter superfluous; but, as it is, it is not at all connected with his department. In a treatise on shooting, he had properly but two sorts of dogs to describe—the spaniel, broken either to *flush* or to *set*, and the pointer. Example most likely seduced him into a belief that a generic history of the animal was necessary. All who have written on any, or all, the parts of the chase, have adopted the same method of introduction. They have trodden in each other's steps since the days of doctor Caius; and hardly any one has excelled his predecessor.

We shall not attempt to combat that ridiculous sentimental affectation which, to the praise of our understandings, is fast losing ground among us. If, indeed, it had consisted in more than words in its professors, we might have given them some credit for their practice, though we had not followed it. But these pretty male and female fops never take the trouble to visit the butchers' and poulterers' shops, to remark the daily carnage that is exercised to pamper their appetites. The sentimentalist, after ranking the sportsman in the catalogue of barbarians, goes home, and dines, without hesitation, on the lamb and the pigeon. The folly of these pretenders to humanity requires no serious reply. Field sports are both pleasing and healthful employments. The country gentleman could hardly fill up his time without them. He may practise them safely without endangering his innocence; and, if shooting be his choice, he may read with considerable advantage the volume before us.

Mr. Thornhill enters upon his performance with useful instructions for the breed of pointers and spaniels, and then passes on to the mode of breaking and management. With much reason he recommends the use of the large spaniel, or setter, for grouse, and prefers the smooth or Spanish pointer for partridges. His motive is evident: the latter is more tractable, but less capable of fatigue: he cannot bear the labour which is required

for trying the mountains. Most sportsmen know something of managing a dog in the field; but it is not every one who understands the first rudiments of his education. The following is the author's advice; and it is very judicious.

'Let it be always remembered, that the sportsman who breaks his own pointers and setters, is rewarded well for his trouble, as he will have a decided superiority in the field over the sportsmen that do not.

'When you have made choice of a young pointer, that in every respect answers to what I have before described, it will be necessary to begin to teach, or break him in, at the age of from nine to twelve months. A young pointer should not be broken in too early, for fear of his being chest-foundered, a circumstance that commonly follows, when dogs are broken in too young. He should be first taught to crouch, and lie down at command, and not dare to stir from that position until he is ordered; he will soon be brought to this by gentle correction when he disobeys; and he should be always rewarded when he does right: continue, if you can, always to give him his lesson before feeding time, and never feed him but when he deserves it; this will always teach him to do well for the sake of his victuals; you should not allow any person to interfere with you in breaking your own dog, for two masters breed a confusion; always be careful to use the same words in your lessons, and select those that are most plain in their sound, and most distinct from one another, which do not alter on any account; for your dog being guided wholly by the sound, and not at all by the sense, any alteration in them, though the change be into words of the same meaning, will confound him. The words *down* and *close*, are short and expressive; and none other need be made use of when he is ordered to crouch. The sound, or word of correction, is next to be taught him; for it seldom happens, when you give him his lessons, but that you will find faults committed, and none should you allow to escape without correction; in this case, the word *sirrah*, spoke sharp and with anger, will be always understood by him; words of encouragement must be also taught him, such as *good boy*, or the like, at the same time he should be clapped on the back, you must also teach him words of advice, such as *take heed*, which will put him in mind of his business, put him on his guard, and make him diligent, he will also by this treatment become useful and cunning, and at the same time, cheerful and pleasant within himself; knowing that he is doing his master a pleasure. Always allow a young pointer, (or indeed any young dog) his liberty; if he is kept confined, he will get out at the elbows, weak and bandy; it will be proper to allow him to follow when you walk out. After you have brought him under proper subjection, you ought, by all means, to take him out with an old staunch dog; but do not allow him, at this time, to hunt too severely; the old one will give him a notion of beating and ranging his ground, and when you are at leisure teach him to crouch to a piece of bread, or any thing else, to bring him under command; or when he is feeding, stop him, and do not allow him to touch his mess until you direct him to do so; when you think he has waited long enough, speak kindly to him, and encourage him; if he does not obey, speak roughly to him and check him; use him always to obey your whistle,

or the motion of your hand, in preference to your voice; for the more silent you are in the field, at all times, the better; feed him always yourself, and constantly after his lessons, which will seem to him a reward, will endear you to him, and make him fond of you; but never over-feed him.' p. 53.

' When your young pointers (or dogs) begin to hunt, and you perceive they know their game, you had better hunt them by themselves; it is easier to stop them than when in company; as when other dogs are in the field with them, it makes them more eager and capricious; they will, by symptoms of waving their sterns, show you that they have got the scent; but care must be taken not to stop them too soon, as it will be necessary to allow them for some time to chase the game, previous to stopping them, particularly if it were long before they began to notice them. It is not by any means difficult to stop any kind of dog after game, especially a well-bred pointer or setter. You will find by experience, that when a young one chases his game, and begins to know what he is about, he will sometimes, on coming up to it, make a sudden stop, and then run in on the birds; at this time, therefore, it will be the most proper to begin to stop him, and you must not only exert yourself, but take every advantage you can in favour of the dog, such as taking the wind, and hunting him against it; and it will be a capital plan to take an old steady, staunch one with him, if the old dog find the game first, let the young one spring it if you can, and in hunting, take care not to allow either of them to go out of the field before you, (or in sporting terms, *break field*;) when you cast him off to hunt either to the right or left, as your judgement and experience will decide, walk slowly, making the dog cross you backwards and forwards, hunting across the field from hedge to hedge, every now and then advancing yourself sixty or a hundred yards, always keeping the wind in his favour, and when you wish him to cross, make use of your hand, the less noise you make the steadier he will hunt, and will constantly look for the signal; whereas if you hunt him with your voice, he will hear you, and scarcely ever turn to look for you, or at you.' p. 57.

Our author proceeds to describe the various sorts of game, and the best mode of finding them. The grouse, the partridge, pheasant, woodcock, snipe, and hare, alike occupy his attention. We should have severely reprobated his mentioning the last article at all, did he not seem himself duly sensible of its impropriety. This may be, in some measure, an excuse; but it is not a sufficient one. For a sportsman to give regular instructions for the shooting of hares, surely looks a good deal like poaching. Most sporting men have a number of anecdotes, which they really believe to be true in spite of their improbability. One is related in this part of the performance which we cannot refrain from giving to the reader. We shall introduce it with the Italian caution—*crede chi vuol*.

' A most curious circumstance occurred respecting a jack snipe, that was sprung several times by a Mr. Molloy, formerly a quarter-ma-

ster of the 64th regiment; while he was quartered at Geneva-barracks, Ireland, [which] is well worth relating: He regularly, after his duty was done, or if he could possibly obtain leave for a day, used to equip himself for shooting, and always sprung this jack snipe, at which he fired and followed, and the bird used to pitch so close to him at times, that he was confident he had shot it, and used to run to take it up, when, to his great surprise, it would rise and fly a little farther; he actually acknowledged he fired, one day, eighteen times at this bird, and after shooting at it for the whole season, he happened to be crossing the bog it lay in, when he put it up, and exclaiming, "there's my old friend," threw his stick at it, and killed it on the spot. When ever after, any of his brother officers found a jack snipe, they were always sure to say, "there goes quarter-master Molloy." p. 135.

Next in order comes many a serviceable remark on the fowling-piece. Gunners, in general, are apt to be too venturous; but Mr. Thornhill is cautious in the extreme. 'Weigh your fowling-piece,' says he; 'and into a single-barrel gun (weighing stock, lock, and all) of six pounds, or a double-barrel of six and half, put two drams and half of powder and one ounce and half of shot.' We are not fond of high charging; but, unless the bore is very small, we should think this quantity barely sufficient. Mr. Thornhill, however, speaks with confidence; and he is generally so correct, that, till we have tried, we will not dispute it with him. In some of the matter of this section, nevertheless, we cannot agree with him: his *practical* remarks on gunpowder are not in unison with philosophic *theory*.

After giving a short and useful extract from the game-laws, the writer adds a list of canine distempers and their remedies, and closes all with some general remarks. We shall select one, and take our leave.

'There are no fixed rules for beating covers, but yet they should not be beat in a slovenly manner. "Make the ground good," says Mr. Daniel, "it will save time, and frequently produce the object of pursuit." A *nid* [*nidus*, nest] of pheasants, are sometimes collected in a narrow compass, and in the middle of the day conceal themselves very close. In the early part of the season, pheasants prefer grassy, brambly, two and three year old copse, and it is not labour in vain to try higher growths, for as the season advances, they will lie in clearer bottoms.

'As soon as you have fired, you ought to call your dog, and make him lie down at the shot, if you kill a bird, let it remain, or if you have only winged it, do not attempt to run to secure it, it will be better to lose the bird than spoil your dog; and should he be a young one, the farther the bird has run the better for him, for one bird retrieved in this way, will be of more service to the dog, than ten days hunting, by thus being accustomed to come in, or lie down at shot, until you have reloaded, you will not have the mortification to see the birds raised by your dog, when you are not probably loaded, and the precaution will be attended with satisfaction to yourself, in point

of shooting, and improvement to him. Is it not very natural, if a dog sees you run, to do the same? The compiler has pointers, that if they hear the shot fired, will not even come up to him to find out the cause of the firing, as many dogs will; but will sit down at a distance, until they see him move.

' In the north of England, particularly Cumberland, they have capital pointers and setters; and the sportsmen of that country, (at least such as the compiler has seen) are perfectly content with their dogs, if they will but stand the birds, and afterwards leave them to act as they please, not caring, or paying the smallest attention to their running on the shot.

' The compiler had three dogs, Brisk, Chance, and Nelson, (setters) which came to their separate sets in one field; he first went up to Chance, and killed a partridge to him, and although the other two dogs saw the bird fall, they remained steady at their sets; on picking it up, Chance backed the others directly. The compiler then loaded, and killed a cock-pheasant to Nelson, and afterwards a hare to Brisk, and not a dog broke ground, or rumped either fur or feather.

' Pointers should be kept always tied up: if they are not, they will be liable to several accidents, but those that are kept so, to be all the better when they come to be hunted.

' If the owner lives in the country, these dogs are always trying to get into the kitchen, and although they do no damage, they still have the name of it; for every thing Molly the cook breaks, is sure to be charged to Ponto's account.

' If, on the contrary, the owner lives in a town, the dog is liable to have his legs broken, or perhaps a kettle tied to his tail; besides, the disgrace that attaches to the owners of these dogs, which are always seen stealing, and skulking through the streets, half starved.

' A pointer should never be allowed to fetch, or bring his game, if he should be hunted in company, for there is not one dog in one hundred, but it will be sure to make him break his game, and is certain to make young dogs also break away at shot.* p. 389.

On the whole, though we have been well pleased with this volume, yet it is not without its blemishes. The language is so generally incorrect, that not one page can be quoted without grammatical inaccuracy. To this it will be replied, that, independent of sportsmen not being refined scholars, the author has pleaded privilege in his dedication. There is, however, another fault, which his brother gunners will look on as less pardonable: he declares, in the commencement, that one of his main objects is cheapness to the purchaser; and yet a book is swelled out into quarto that might have been printed in middling twelves: besides which, a number of useless plates are added, both the drawing and engraving of which are execrable.

MONTHLY CATALOGUE.

POLITICS.

ART. 15.—*Thoughts on the Formation of the late and present Administrations.* By Lord Archibald Hamilton. 8vo. 2s. 6d. Longman and Rees. 1804.

WHEN we observed the 'third edition' in the first title, we recollected the verses of Pope:

'Let but a lord once own the happy lines,
How the wit brightens, how the style refines!'

Yet, when we read the pamphlet, we were well pleased with strength of reasoning; with forcible, concise, statements; with all the artifice of a political disputant. Lord Archibald's 'Thoughts' are designed to reprobate the choice of the former administration, and Mr. Addington as its principal, as well as the partial change on the introduction of Mr. Pitt. They have already given birth to two answers, which we propose to consider when we have examined the work before us; as we would not mingle our arguments with theirs, nor 'thrust a sickle into another's harvest.'

Lord Archibald Hamilton begins with some positions which are at least disputable—in our opinion, ill founded. He thinks that there should be a kind of apprenticeship to the office of premier; that there must be family interest, talents, and, above all, the ordeal of subordinate office. On these points we can make no observations. The system of his lordship may have support from former experience: we suspect it has none in common sense and calm reflexion. It may be asked, is the situation of premier so peculiar and isolated as to be accessible by none but the initiated? Have not common sense, a knowledge of the respective interests of the different powers of Europe, spirited and active energy of mind, ready resources, and extensive views, more effect in forming an able first minister, than the labours of a *commis*, the common drudgery of the treasury, the paymaster's office, or even an inferior station at the admiralty? Lord Archibald will not, for a moment, support the position, that vast extensive views, expanded intellect, and comprehensive systematic information, can be supplied by the minute talents of the arithmetician.

Again: what is our author's system but a revival of the whig oligarchy? Without engaging in the tendency and effect of their principles, let us look to the fruits. To go back no further, what was the system of the marquis of Rockingham? what the conduct of the duke of Portland's administration? We will answer—meanness and

submission : yet these premiers had served their due apprenticeship ; the members brought family interest, and what is called experience, to the cabinet.

In the former part of the present pamphlet, lord Archibald remarks, with some degree of acrimony, that Mr. Addington, without the slightest pretensions from family connexions or interest, was introduced as first minister *ex mero motu* of his royal master. *Sic volo, sic jubeo: stat pro ratione voluntas.* He here hides a principle which he afterwards expressly acknowledges, that the king has the power of choosing his ministers, while the people show their approbation by their confidence. In this instance, the king exercised his power of choice ; and did the people reject ? Of this there is no evidence. Mr. Addington had, in every national question, a majority, except once, when taken by surprise. Mr. Addington's resignation was not the consequence of the *disapprobation* of the people, but of some failure in that full expression of approbation which he had hitherto experienced ; a weight in the opposite scale with which he thought he could not successfully contend, and an additional weight in another place, at least equally formidable. It is well known by what a complicated coalition the divisions in the house of commons were influenced : and, strange as it may appear, the appellation of '*the doctor*' was a weight that no abilities and no success could countervail.

The great points which lord Archibald labours to establish, are, that Mr. Pitt, having countenanced, perhaps introduced, Mr. Addington, afterwards rose on his ruins ; and that having to a certain point '*forced*' (*sit venia verbo*) his own introduction, he should not have with equal success forced that of others. The last we must first notice.

It was undoubtedly, as lord Archibald contends, the wish of the nation to have a broad, effective administration, composed of the first abilities of the country. The idea was natural, reasonable, and proper : yet it was so on a very superficial view. Abilities may be excellent, but they may be distorted by preconceived opinions : with the most perfect, well-meaning integrity, men may not think alike. Had Mr. Wilson, for instance, and Dr. Franklin, formerly met to preserve a building from lightning, will it be supposed that any good could have resulted from the consultations of this philosophical cabinet ? In the same way, Mr. Fox, submissively proposing blunt conductors, and crouching to the self-elected Corsican, would not easily agree with the *sharpness* of Mr. Windham, or the firmness of lord Grenville. It is in reality not the *best* opinions, but those which will best *coalesce*, that the nation chiefly wants. Were the powers of ten horses employed in pulling, by an equal number on each side, different ways, the effect could not equal that of one in a given direction ; for it would only be the difference between the weakest and the strongest. We impeach no man's integrity ; but were that of any one suspicious, the difference would be still greater.

From such principles, then, obvious on a superficial view, what was Mr. Pitt to expect from so heterogeneous a cabinet ? He resigned professedly on the point of the catholic emancipation. This was sufficient ; but we are not to suppose that there was no other difference of opinion. Mr. Addington, as we have said, succeeded ;

probably by his recommendation, certainly retaining his support. This support the late premier lost in consequence of the negotiation, which has already been the subject of our remarks; and, whether justly or not, *one* must rise on the ruins of the other. We need not repeat, that the motley coalition of all parties (a coalition that could not, without the most disgraceful concessions on each side, have joined in a cabinet) accumulated a respectable majority too powerful to be withstood. Mr. Pitt was applied to; and it has been asserted, without contradiction, that he proposed at least a part of the former cabinet, perhaps the whole of the former opposition. This was rejected; and, we contend, most constitutionally: and it might perhaps have been a reason for his rejecting all connexion with administration, had he been united with either or all the parties of opposition. No one, however, has offered his objection; and we, of course, conclude that it had no existence. He joined the opposition, but formed no part of a systematic union: he approached the vortex, but was not hurled within its power. The best administration that he could form, he has probably produced: the sovereign has approved of it; and the only constitutional disapprobation which it could experience, has not appeared.

Many of the collateral parts of this pamphlet we need not enlarge on: the answers we shall take up in another number.

ART. 16.—*A Proposition of a System of Finance, or Plan of general Contribution, which was submitted as a Substitute for the late Income-Tax, and is recommended as a general Relief to the present Mode of Taxation: with Hints and Observations which Circumstances have suggested to the Proprietor.* 8vo. 1s. Hurst.

The plan is ingenious, and not injudicious; but it fails in one essential point, viz. the want of a sufficient countervailing power to the influence of fraud. The office of inspector is not sufficiently effectual, as the officer is not armed with the requisite authority.

ART. 17.—*A calm and dispassionate Address to Sir Francis Burdett, Bart. pointing out to him the Causes of his Defeat at the late Election of a Member to represent the County of Middlesex. By an Independent Freeholder.* 8vo. 1s. Rivingtons. 1804.

This dispassionate address reflects the highest credit on the temper, the candour, and the integrity of the author. We could not have spoken of such conduct so calmly. May this well-meant remonstrance meet with success!

ART. 18.—*An Argument as to the Exchange between England and Ireland; and a Suggestion by which the Aberration which has taken Place is proposed to be remedied upon certain Principles applicable to the Issue of Paper Currency and of Coin.* 8vo. 1s. Longman.

To engage in an inquiry respecting the cause of the state of exchange between this country and Ireland (a subject on which the best politicians differ), would be scarcely within our limits, or consistent with the objects of a literary journal; and, without some inquiry of this kind, we could not properly appreciate our author's 'suggestion.' From the best attention, however, that we have been able to afford it, we do not think the proposed plan likely to succeed.

ART. 19.—*The Opportunity; or Reasons for an immediate Alliance with St. Domingo. By the Author of the Crisis of the Sugar Colonies.* 8vo. 3s. 6d. sewed. Hatchard.

This pamphlet, addressed to Mr. Addington, is dedicated to Mr. Pitt: in fact, it is directed to the prime minister. The author's object, as the title expresses, is to recommend an acknowledgement of the liberty of the negroes of St. Domingo; to enter into federal engagements with them as a sovereign and independent people; and to grant, or if necessary to offer, a guarantee of their independency on the empire of France. This subject it is not for us to discuss. Our author offers strong reasons for his opinions, and claims our confidence from the fulfilment of his former prophecies. The conjuncture is an arduous and difficult one: it is a new situation in the political system, and will require mature deliberation. This, we have said, is not our province.

RELIGION.

ART. 20.—*A Letter to the Rev. Richard Warner.* 8vo. 1s. Robinsons. 1804.

ART. 21.—*Christianity a System of Peace: a Letter to the Rev. Thomas Falconer; in which a Vindication of the Subject of the Rev. Richard Warner's Sermon, entitled 'War inconsistent with Christianity,' is attempted.* 8vo. 1s. Robinsons. 1804.

These pamphlets owe their origin to a sermon preached by Mr. Warner, in which he attempted to prove warfare, even of a defensive nature, to be wholly incompatible with the precepts of Christianity. Such an opinion, published at such a time—a time when we are menaced with immediate invasion—was not likely to pass uncensured. It called forth, on its publication, the first of the above pamphlets; written, as the signature (T. F.) leads us to suppose, by Mr. Falconer. In this, Mr. Warner's arguments are, to our apprehension, completely refuted; nor does the second pamphlet, which is intended as a reply to the former, induce us to change our opinion. We are happy, however, to observe that the present controversy has been conducted without the unbecoming warmth which similar contests are naturally so apt to engender.

ART. 22.—*An Essay on the Christian Sabbath; including Remarks on Sunday Drilling.* By Joseph Hughes, A. M. 8vo. 1s. Williams. 1804.

The greater part of Mr. Hughes's pamphlet cannot fail to obtain the assent of all serious persons. The importance of paying a proper respect to the Sabbath, all must be ready to acknowledge: and that it does not meet with the regard due to its nature, we with sorrow confess. Of the propriety of Sunday drills, to which the latter part of the above is directed, there are different opinions. We think nothing but imperious necessity can warrant them; and that the abuses to which they are liable, and which Mr. Hughes notices, are worthy of attention.

ART. 23.—*Thoughts on the Calvinistic and Arminian Controversy.* By George Stanley Faber, B. D. 8vo. 1s. 6d. Rivingtons. 1804.

Mr. Faber justly observes, that men are in general too much attached to system, and consequently disposed to bend scriptural texts to a meaning that favours their particular opinions. He remarks, with not less justice, that a part of man's salvation is attributed, in the sacred writings, to the operation of God, a part to his own exertions. Mr. Faber then proceeds to show the contradictory conclusions that may be drawn from different passages of Scripture, separately considered, and, consequently, the folly of arguing from 'insulated expressions.' Every unprejudiced man will see the propriety of these observations, and be disposed to pay attention to the following dogma :

'Admit no conclusion, in any system, unless the conclusion itself, as well as the thesis from which it is deduced, be explicitly set forth in holy scripture.' p. 19.

MEDICINE, &c.

ART. 24.—*Minutes of some Experiments to ascertain the permanent Security of Vaccination against Exposure to the Small-Pox. To which are prefixed some Remarks on Mr. Goldson's Pamphlet; with an Appendix, containing Testimonials, and other Communications, from many of the most respectable Medical Men in the Neighbourhood.* By Richard Dunning, Surgeon. 8vo. 1s. 6d. Robinsons. 1804.

Mr. Dunning has engaged in this dispute with all the enthusiastic warmth which seemed to animate his first work, and with considerable success. Indeed, as we have already observed, the permanent security obtained by vaccination is no longer a question.

ART. 25.—*An Answer to Mr. Goldson, proving that Vaccination is a permanent Security against the Small-Pox.* By John Ring, Member of the Royal College of Surgeons. 8vo. 1s. Murray. 1804.

Mr. Goldson has been a considerable benefactor to the cause of vaccination, by his cases. The attention of numerous respectable practitioners has been led to this part of the subject, and vaccination is placed by it on a much securer basis than before. Our own opinion we need not repeat.

ART. 26.—*A Statement of Evidence from Trials by Inoculation of Variolous and Vaccine Matter, to judge of the Question, whether or not a Person can undergo the Small-Pox after being affected with the Cow-Pox.* By the Physicians of the original Vaccine Cow-Pox Institution. 8vo. 2s. 6d.

The authors of the statement before us have considered the question in almost every possible point of view, and have shown, with evidence scarcely short of demonstration, that the supposed cases of variola subsequent to the cow-pox, have originated in an erroneous view of the one or the other disease. To prove a negative is impossible;

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yet we can say (we think, with confidence) that, should there be instances of variola after *true* cow-pox, they will not be more numerous than those in which the former has occurred a second time. Vaccination, therefore, will be found as certain a preventative as the actual existence of the true small-pox.

ART. 27.—*A Treatise on Cheltenham Waters and bilious Diseases: to which are prefixed Observations on Fluidity, mineral Waters, and Watering-Places.* By Thomas Jameson, M. D. &c. 8vo. 5s. Boards. Murray.

It has been the subject of some apprehension, and the cause of some complaint, that the power of the mineral springs at Cheltenham have in part lost their efficacy. The demand for the waters is undoubtedly in a much larger proportion than their supply: but Dr. Jameson, who resides at Cheltenham as a practical physician, informs us, that the sulphureous impregnation only is diminished, and that attempts are making, with promising prospects, to secure an accommodation from springs of the same nature. Cheltenham is situated in a valley, where shells, and other marine debris, prove that the ocean once flowed. The soil is a bluish, in many places an indurated, clay; and it is singular this stratum of clay has not been penetrated. When the borer has once found its bottom, there is some probability that the mineral water will rise in more copious streams. Yet the experiment, for obvious reasons, should be made with caution. The boy who aimed at the treasure of golden eggs, lost even the succession.

A very ingenious and comprehensive view of the origin of springs, and the various impregnations of mineral waters, is premised. We next find a description of the vale in which these waters are discovered (that of Evesham in Gloucestershire); and it is followed by an analysis of the upper spa. Our author might have recapitulated the analysis of the lower spa by other medical writers, which he seems to suppose well known. The two springs are indeed very similar, but the new spa contains a larger proportion of neutral salts than the spring formerly employed. The temperature of this water was, in August, at eight in the morning, 54° ; its specific gravity 1.0059; it boiled at 214.5° , when the mercury stood at 29.6° . It contained, loosely combined, carbonic acid gas, and another portion which required the assistance of heat for its expulsion, with some atmospherical air, and a probable admixture of azot or nitrogen. A wine-gallon contained 196 grains of sulphat of soda; 159 of sulphat of magnesia; 33 of muriat of soda; 32 of sulphat of lime; and 26 of carbonat of lime, and magnesia; each in a desiccated state.

Dr. Jameson next treats of the use of these waters, which, with strict propriety, he thinks *best* adapted to chronic congestions in the liver, with the diseases consequent to this state, and less adapted to nervous diseases and complaints connected with nervous debility. His classification of bilious diseases displays much judgement and extensive practical knowledge; but we find nothing so peculiarly new or interesting as to induce us to select any particular passage. We may just hint, that bile *may* be a stimulus to the *intestines*, though it may not prove so when taken into the *stomach*.

The diseases in which the Cheltenham waters may be particularly useful, are, in our author's opinion, 'inflamed and schirrous liver, or spleen; bilious state of the stomach; indigestion and costiveness; hypochondriacal complaints; sick head-ach; some kinds of bilious purgings; jaundice, and biliary concretions; pimply eruptions; scaly and scurfy states of the skin; inflammations of the skin and face; exudations and watery humours of the skin; some kinds of scrofulous tumours; inflammations of the eyes and eyelids; inflamed ulcers and discharges of the legs; some stages of rheumatism and gout; inflammatory asthma; female diseases; piles and fistula; diseases of the kidneys; gravel and stone.' These diseases are chiefly relieved by the mild purgative quality of these waters; for though some traces of iron are discoverable, the quantity is apparently not so great as to be ascertained by analysis, and the power not so considerable as to render them peculiarly serviceable as tonics. Indeed, in general, our author considers much of the benefit of mineral waters to be derived from their power as diluents, from relaxation of mind, pure air, regular exercise and hours. In these waters, the neutral salts add to the virtues by a gentle laxative power. The acidulous gas will undoubtedly in some stomachs be slightly stimulating.

The maladies in which the Cheltenham waters are particularly contraindicated, seem to be 'nervous diseases, palsies, consumptions, hæmorrhages, dropsies, fevers, and very acute diseases.' In many of the latter, a solution of neutral salts is undoubtedly useful; but these are not complaints for which patients would go to Cheltenham. They are of doubtful utility in affections of the head, both on account of their bulk distending the stomach, and the effects of their gaseous impregnation. Their use is afterwards directed with great judgement; and, as an assistant to their effects, particularly in those who have injured their constitution by a residence in warm climates, tepid and warm baths are established at Cheltenham. A steel water has been also discovered in the neighbourhood, where the metal is suspended by carbonic acid gas.

ART. 28.—*The London Dissector; or a Compendium of practical Anatomy: containing a Description of the Muscles, Nerves, and Viscera, of the human Body, as they appear on Dissection; with Directions for their Demonstration.* 12mo. 5s. Boards. Murray.

Precision, accuracy, and perspicuity, are the only objects to be attained in a work like the present, and they distinguish 'the London Dissector' in an eminent degree. We have been highly pleased with the peculiar exactitude with which the different parts of the human body are here unfolded.

ART. 29.—*Practical Observations on Hernia, illustrated with Cases.* By B. Wilmer. Second Edition enlarged. 8vo. 6s. Boards. Longman and Rees.

This work is now well known, and has been generally commended. The more important additions relate to the strictures in the sac, and a new method of facilitating the reduction. The strictures our author continues to find; and his new method consists in placing a cold

weight on the sac—either a leaden weight or some mercury in a bladder. We would recommend the mercury to be previously cooled in a frigorific mixture: and, as it soon acquires heat, another portion should be kept in readiness to supply its place.

POETRY.

ART. 30.—*The Lewes Library Society; a Poem.* By John Button, Jun. 4to. 2s. 6d. Button and Son. 1804.

Mr. Button pretends not to claim the highest mead of praise; and to a moderate one he is certainly entitled. The subject is not calculated to lift the poet to the summit of Parnassus, but round its base he wantons not unprofitably. It is no very pleasing part of poetry to write a catalogue of names. Pope has been looked on almost as a prodigy, for the uncommon skill with which he has disposed Homer's ships and heroes in so smooth a versification. The names of Mr. Button's authors were, it is true, much less difficult; but they nevertheless involved him in a task which he has meritoriously executed. The following is the opening of the poem: and it will be found no contemptible specimen of versification.

' Near yonder ruins, where, in warlike pride,
Those tow'rs of yore the Barons' force defied,
When Montfort's sword victorious won the plain,
And Ouse's waves ran crimson to the main,
A modest mansion, venerably neat,
With book-stor'd window decorates the street;
Above the door a board attracts the eye,
Inscrib'd, "The Library Society."
No lofty portico, or marble flight,
With smooth ascent the student's steps invite,
Such as that fane where Rome admiring gaz'd,
Which regal grandeur to Apollo rais'd;
There pillar'd domes in fine proportion heav'd,
And iv'ry chests the polish'd scrolls receiv'd,
Inshrin'd in burnish'd gold the di'mond shone,
And the god's features breath'd in Parian stone.

' How low the entrance! and how strait the way!
That leads to realms where Science holds her sway.
Lo! rang'd around her num'rous subjects lie,
The regular confusion charms the eye:
Here bend the shelves by pond'rous folios prest,
And there the quarto's squarer volumes rest;
Of bulk inferior, but more graceful size,
Arrang'd on either hand th' octavos rise;
Along the front the pigmy twelves extend,
Aspiring spurn the floor, and to the roof ascend.

' So when commanders lead their trains from far,
And harmless imitate the rage of war,
Squadrons on squadrons press in thick array,
Each rank obedient treads its destin'd way,
The firm battalion, and extended line,
Here sep'rate move, and there in one conjoin.' p. 1.

NOVELS, &c.

ART. 31.—*My Uncle Thomas ; a Romance. By Pigault le Brun.*
4 Vols. 12mo. 16s. Boards. Lane.

When the vices and follies, the foibles and peculiarities, of one country are exhausted, and the morbid craving for novelty still increases, it is fortunate that there are other worlds to conquer, untried sources to supply the imaginary wants. Our novelists long ago exhausted Spain; which, after Cervantes, and the authors who supplied the industrious Le Sage, had little to offer. France has been long since in requisition; and the mawkish and insipid, the sentimental and gallant, works of this kingdom, have afforded a plentiful supply. Germany has more lately opened her stores of humour; and we are compelled to smile, by the whimsical peculiarities of heroes in jack-boots, and barons boasting of thirty quarterings. Our present author hangs suspended between the two countries; and has formed a busy bustling epic of a new species, in which he has mixed the peculiarities of each country; sketching, in many parts, some of the more striking features of our own. 'My Uncle Thomas' was one of the first of these which appeared in the English language; but it by accident escaped us; and we prefer noticing it so late to omitting it altogether, as it adds to the merit of being one of the first, that of possessing the peculiar characteristics of the author in the most striking view. The narrative is rapid, the descriptions overcharged; the characters stand forward with a boldness that interests us, yet with features so harsh as often to disgust. Notwithstanding these faults, the broad humour, the rapid changes, the singular situations, render our author's works highly entertaining, and conceal the monstrous improbabilities which would otherwise destroy the illusion.

'My Uncle Thomas' is not, in our opinion, the best of these works. The faults of Le Brun are more glaring, and his merits less conspicuous. The touches are seldom light, or delicate; the brush is heavy, the colour loaded; the picture appears a gross caricature. The political allusions to the conduct of the Corsican are not without the humour of that peculiar kind for which Pigault le Brun is so much celebrated.

ART. 32.—*Monsieur Botte ; a Romance. By Pigault le Brun. 3 Vols.*
12mo. 12s. Boards. Lane. 1804.

This novel, in its general character, resembles 'My Uncle Thomas;' yet its peculiar faults are less glaring: we laugh with more glee, and with less reproach from our judgement or subsequent reflexions. M. Le Brun seems fond of painting violent and obstinate men; and 'M. Botte' is a milder copy of 'Thomas' in a different rank of life. The *dénouement*, however, is not happy. The most delicately drawn and best contrasted characters, are those of Horeau and M. Botte. That of the Marquis is well supported. But the great address of the author is conspicuous in the under character of William. We have never seen better management. He is well discriminated, and never appears but when his peculiar talents are required.

ART. 33.—*Something Odd : a Novel. 3 Vols. 12mo. 12s. Boards. Lane. 1804.*

It is 'something odd' that a man of talents, either from a plan not well matured, or abilities mis-directed, should have failed so much in the conduct of the fable, as to render his work tedious, notwithstanding some splendid passages and well-managed scenes. The whole is not very interesting. We catch a glance too early at the events; and the catastrophe is so hurried and indistinct, that at last we gain little more information than we had in the beginning. The character of Mr. Jacque, which at his first appearance is attractive, soon loses all its interest, from the subsequent events and the conclusion. 'Something odd' it certainly is: we wish we could style the work, something excellent.

ART 34.—*Galatea : a Pastoral Romance. From the French of M. Florian. By Miss Higbly. 12mo. 7s. Boards. Higbly. 1804.*

The Galatea is sufficiently known; and requires not, at this time, any encomium or any remarks from us. This translation is executed with peculiar simplicity and elegance: it is the production of a very young lady, and reflects the highest credit on her taste and genius. The typography and embellishments are executed with great beauty, and add to the attractions of a charming work.

ART. 35.—*The History of a Dog, written by himself, and published by a Gentleman of his Acquaintance. Translated from the French of Pigault le Brun. 12mo. 4s. Boards. Lane. 1804.*

We have our own 'Pompey the Little;' but that work is designed as a satirical mode of conveying strictures on the follies and vices of mankind. These adventures are more strictly canine; but, as it is observed of Swift, that, in representing the virtuous Houyhnhms, and the depraved Yahoos, he was obliged to copy good and bad men, so our author, though he speaks of dogs, does not very strictly characterise their peculiar manners, but gives them the feelings and the reasoning of human beings. We have been greatly pleased with Pigault le Brun's novels, and may, on a future occasion, enlarge a little on his talents and conduct as a novelist. In this work, his vivacity, however, seems to forsake him: it is pleasing and entertaining, though in a degree inferior to his other performances.

ART. 36.—*Modern Literature : a Novel. By Robert Bissett, LL. D. 3 Vols. 12mo. 10s. Boards. Longman and Rees. 1804.*

This work requires a key: but, in reality, so little of it is germane to the title, and the literary personages introduced are so few, and so uninteresting, that we can find 'Modern Literature' in the title only. We can distinguish merely one reviewer, who suffers his opinion to be seduced by the charms of a young millener who brings her literary bantling for his approbation; an author of all trades, excelling in none; and the hero of the literary tribe, Dr. Strongbrain, whom the author praises with peculiar complacency. Who this gentleman is, we cannot say; but the features are those of Dr. William Thompson. The novel itself is not interesting, and can claim no very considerable share of praise.

ART. 37.—*The Duchess de la Valliere ; an Historical Romance. By Madame de Genlis. 2 Vols. 12mo. 8s. Boards. Murray. 1804.*

We have expressed some disapprobation of historical romances in general, as the truth of history is so often violated in them. The present novel forms, however, an exception. The amiable duchess de la Valliere is drawn in fascinating, but we believe true, colours ; and the character of Louis XIV. is placed in a very amiable and pleasing point of view, apparently from authentic information.

ART. 38.—*The American : a Novel. By William Higgins. 2 Vols. 12mo. 8s. Boards. Ridgway. 1804.*

We are not acquainted with Mr. Higgins ; but he has shown himself little acquainted with the American continent, American manners, or human nature in general.

MISCELLANIES.

ART. 39.—*Remarks on the Edinburgh Review of Dr. Thompson's System of Chemistry. By the Author of that Work. 8vo. 1s. 6d. Hurst.*

On this subject we can with propriety offer no remark, but must content ourselves with announcing the publication. We must, however, always regret the necessity which compels an author to appeal to the public on such a subject, as it implies ignorance or prejudice on the part of the journalist. Dr. Thompson accuses the authors very pointedly of a predetermination to condemn his work.

ART. 40.—*Letters of Consolation and Advice from a Father to his Daughter on the Death of her Sister. 12mo. 2s. 6d. Boards. Rivingtons. 1804.*

We never remember to have read a book that afforded us more real pleasure than the present. Happy the man who can thus write under the most oppressive circumstances ! Happy the family whose head can console them by such fervent, such submissive piety !

ART. 41.—*A Treatise on Pocket Watches : pointing out the Defects so generally complained of in their Construction ; also stating, from the most correct mathematical Principles, a general Rule, adapted to mechanical Practice, by which Manufacturers may effectually avoid all Irregularity in the Motion of a Watch. By William Parr. 8vo. 3s. 6d. Boards. Cadell and Davies. 1804.*

There is much good sense, and correct calculation, in this little tract, which it is impossible to abridge. Watch-makers should read it with attention ; and by far the greater number will reap considerable advantage from it.

ART. 42.—*A Letter to the Editor of the Edinburgh Review. By Robert Jackson, M.D. 8vo. 1s. Cadell and Davies.*

Dr. Jackson defends himself against some animadversions in the Edinburgh Review with great mildness and urbanity. With respect

to the subject in dispute—*non nostrum est tantas componere lites*. We are, by profession, of counsel for the defendant in this cause.

ART. 43.—*A Treatise on the Motion of Fluids, natural and artificial, in a plain and familiar Style; with ten Plates. By J. M. Clare, A. M. Revised and enlarged by R. Hall, M. D. 8vo. 10s. 6d. Boards. Ridgway. 1804.*

The work of Clare has been highly esteemed; and, at the period of its publication, was a valuable and respectable performance. Numerous, however, are the additions made to this branch of science; and a treatise on the motion of fluids would now fill two quartos; as the subject includes a large portion of modern philosophy, with many of the improvements in the mechanical modes of abridging labour. Perhaps it was necessary to limit the work to its former bulk; but we are compelled to add, that we find little of the labour of revision, and that the additions are few and imperfect.

ART. 44.—*A Map, illustrative of the Changes of the Planet Venus, in respect to her apparent Situation in the Heavens, as seen from the Earth, East or West of the Sun, and whereby she becomes successively a Morning and an Evening Star. 8vo. 1s. Allen. 1804.*

This map is very clear and intelligible, and will materially assist the comprehension of the learner in understanding the cause of the different phases of our neighbouring planet.

ART. 45.—*The new military Finance; containing the History, Pay, and Allowances of the British Army. By Nathaniel Hood, Lieutenant in the Army. 12mo. 4s. 6d. Boards. Longman.*

This little manual contains a variety of information on the subjects which it professes to treat of. Its accuracy we have no reason to doubt; yet we own our knowledge of 'military finance'—(is not the term improper?)—does not enable us to decide on this point.

ERRATA.

Page 146, lines 27, 28, for glimmering taper, read glimmering of a taper.
The price of Adolphus's History of France (in our preceding volume, p. 381), instead of 18s. should have been 14. 4s.